ABSTRACT OF A

Clinical Lecture

ON

INFLAMMATION STARTING IN THAT PORTION OF THE ALIMENTARY CANAL SITUATED IN THE RIGHT ILIAC FOSSA.

Delivered at the General Hospital, Birmingham, on Nov. 10th, 1892,

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GENTLEMEN,—In approaching the question of affections of that portion of the alimentary canal situated in the right iliac fossa, characterised by inflammation, with or without the formation of pus, it will be well to note the clinical characters of cases as they come before us with symptoms either directly referring to that region or where, by operation or after death, the initial lesion of an extensive suppuration or general peritonitis is found to have been situated there. 1. Patients, often young adult males, are from time to time seen with these symptoms: Constipation, nausea or vomiting, slight elevation of temperature—not, however, associated with any rigor—pain in the right iliac fossa of varying intensity, though not as a rule severe, tenderness in this region, together with some swelling that appears early and is comparatively large and at times doughy. Under simple treatment, combined with rest, the attack passes off and recovery takes place, though there may be subsequent recurrent attacks. In these cases there is often a previous history of constipation. 2. When symptoms somewhat similar to the above but more severe are met with. There is often an initial chill or rigor, the temperature rises to a higher level, there is general tenderness of the abdomen, so that unless a careful examination is made no special tenderness is noticed in the right iliac fossa. This, however, can be detected in the early stage of the disease by pressing with the finger-tip on a point one and a half to two inches from the anterior superior iliac spine on a line from that point to the umbilicus. This corresponds closely to the root of the vermiform appendix and is known as McBurney's point. There is a tendency for pain, which in the abdomen is often considerable, to radiate to the testis, thigh, and perineum. The right abdominal muscles may be rigid. Swelling appears after a few days, but not so early as in the preceding class of cases and is more fixed; it can at times be made out from the rectum. Cases presenting these symptoms may terminate either (*a*) by complete recovery, or by a partial recovery which is followed by relapses, the severity of which often increases with their number and any one may set up serious or even fatal mischief; (*b*) by an increase of all the symptoms and by suppuration occurring, either limited by adhesions to its own particular neighbourhood, and after a time making its way to the surface, or by bursting through the adhesions and invading the general peritoneal cavity, giving rise to a sudden development of the signs of a general and acute peritonitis; or (*c*) by the production of the same condition owing to a suppurating or gangrenous appendix discharging its contents into a peritoneum unprotected by limiting adhesions. 3. A few cases are met with in which the patient, often a young boy, is attacked by the sudden onset of a most violent and acute peritonitis, but in whom there is nothing in the antecedent history pointing to the right iliac fossa as the starting point of it, yet a post-mortem examination shows death to have been caused by a purulent peritonitis due to rupture of an appendix containing fetid pus and often in a condition of gangrene. Here then are several groups of cases having (with the exception of the last) certain symptoms in common, such as fever, with pain and swelling in the right iliac fossa, yet some get well never to recur, others never completely recover but relapse again and again, while others terminate in abscess that may point at the surface or burst into the general peritoneal cavity. What are the pathological conditions met with in these cases and what means have we for coming to any conclusion as to the actual state of affairs in each case so that we may treat it on sound principles? Until the last few years these conditions were spoken of either as perityphlitis or typhlitis, but recently the term "appendicitis" has been applied to at any rate a large number of them, as it has been abundantly proved, both by operation and by post-mortem examination, that the appendix has been the cause of the disease. Perityphlitis was first used at a time when it was supposed that the cellular tissue in the iliac fossa became inflamed as a primary affection independently of any inflammation of the cæcum or appendix. If such occurred there could be no objection to the name, but inasmuch as this is not the case it seems advisable to use the term typhlitis where there seems to be good reason to regard the cæcum as the seat of the disease and to signify that the appendix is at fault by using the term appendicitis. Perityphlitis has also been used by those who, while recognising the importance of the appendix as a potent factor in the causation of mischief here, preferred it as indicating that the swelling is around the cæcum. The use, however, of these terms, if founded on an accurate diagnosis of the case, is of more than passing interest, for in studying the pathology of these affections in the iliac fossa we find that the contents of the region—viz., the cæcum and appendix—give rise to symptoms that differ in degree and course. Speaking broadly, while the cæcum is responsible for a few cases where there has been only one attack, probably of a mild character, and many of those in which recurrence has taken place, the appendix is the cause of relapsing ones and nearly all those in which suppuration occurs, suppuration and perforation being seldom due to the cæcum. The numerous cases that have now been recorded enable us to formulate some facts as to the pathology of the cæcum and appendix, while from recent research of Treves and others into the anatomy of these parts certain points have been made out that throw further light on the subject. For instance, it has been shown that the cæcum is usually entirely covered by peritoneum, and that though it may not have a mesentery, as the appendix has, it is for practical purposes as much within the peritoneal cavity as that is; consequently inflammation spreading from its interior is likely to reach a peritoneal covering and not any cellular tissue in the iliac fossa. The mucous membrane of the cæcum may be inflamed in association with a general colitis, or more frequently from irritation due to retention and impaction of fæces; inflammation thus started may spread into the appendix, and by closing the opening from this into the cæcum give rise to an appendicitis with retention of mucus, a recognised cause of recurrent attacks. The cæcum may be the seat of ulceration, either from fæcal irritation, tubercle, dysentery, typhoid or foreign body, this latter being extremely rare. As the result of ulceration its peritoneal coat may become inflamed, together with the peritoneum in the immediate neighbourhood, producing matting together of parts and in very rare cases suppuration or even perforation. From a pathological point of view, then, the cæcum offers a ready explanation for mild and for many recurrent attacks, the cause being usually fæcal accumulation; but for the cause of those in which suppuration is met with we must, with but few exceptions, look elsewhere. If now we inquire what has been found in the appendix when it has been removed for relapsing attacks, or seen at the bottom of an abscess that has been opened, or in the post-mortem room, we find conditions that will account for some recurrent attacks, and for nearly all those where there have been relapses—the patient never having been completely well between the attacks—or where suppuration or perforation had taken place.

Dr. Robert W. Weir of New York has published records of twenty-six cases where removal of the appendix was effected between the attacks, and from these we learn that in no case was any foreign body found; foreign bodies usually causing the graver lesion of perforation. In ten of these cases a catarrhal appendicitis was found, the lumen of the tube being greatly reduced in size; in others, in addition to the catarrh, the tube was found to be distended with mucus or muco-pus. In four there was either bending or kinking of the appendix on itself or a stenosis at its upper end with an accumulation of its contents. While these conditions are sufficient to account for symptoms it must be remembered that post-mortem records show that evidences of previous inflammation of the appendix are often found in those who have died from other causes and who never had symptoms pointing to this region. In the suppurative or perforated cases the appendix has been

found twisted and gangrenous, perforated, with or without there being any foreign body or, what is practically the same thing, any hard fæcal concretion. Another curious fact that has been demonstrated by early operation and its results by examination after death in some cases of acute peritonitis, is that the appendix may be distended with fluid and pass into a condition of gangrene without there being any limiting adhesions. There may be then in the cæcum and appendix causes which can produce peritonitis of varying degrees of intensity. When the peritoneum over the cæcum becomes inflamed, as the result probably of a stercoral ulcer, it may with the relief of the cause of this resolve, or if of greater severity various adhesions and matting together of parts may result, or in very rare cases suppuration or even perforation may take place; but with the appendix the risks of serious trouble are far greater. In favourable cases no doubt resolution with but slight inflammation may take place, in others a dense mass of inflammatory tissue may form, matting together the structures in the neighbourhood; this may remain more or less quiescent, or there may be in its centre a small quantity of pus ready at any time to light up further mischief; or a slight leakage may take place from a distended appendix, but the escaping fluid is prevented either by old adhesions or by a protective inflammation of the peritoneum on neighbouring parts from invading more than a limited part of the peritoneum; this leakage will then set up an abscess, which may make its way to the surface, break into an adjacent organ or into the general peritoneal cavity. And lastly, a distended appendix may discharge its contents directly into the general peritoneal cavity, owing to the absence of proper adhesions. The fact that an abscess, at first localised, may invade this cavity by a bursting of its wall must be ever before one: for, firstly, it is desirable to prevent this—an almost certainly fatal complication—by the early evacuation of pus; and, secondly, when opening one of these limited abscesses the greatest care should be taken to avoid, by rough handling or syringing out, breaking through a barrier whose thickness is unknown but on whose integrity the patient's life may depend. The line of treatment to be adopted in these conditions has provided ample opportunity for the expression of somewhat conflicting opinions by physicians and surgeons. Nor is this to be wondered at when the position is viewed from a distance. Not so many years ago these cases, as already pointed out, were termed cases of perityphlitis or typhlitis, and though the appendix was seen at times to be the cause of the mischief, it was not assigned its proper place, as a frequent cause, until more recently. Cases, then, with symptoms referable to this region, when admitted into the wards of a general hospital, would naturally be assigned to the medical or surgical side, according to the prominent symptoms of each. Those, for instance, where the symptoms were slight—that is, pain in the right iliac fossa, resistance or even swelling, with some elevation of temperature—would naturally come under the care of the physician, who by simple measures would conduct the case to a successful termination. While at the other extreme, cases with local suppuration or general acute peritonitis would come to the surgeon, who would find an operation urgently needed. Consequently while physicians were in favour of general treatment, surgeons on the other hand favoured operation. These conflicting opinions therefore were based on the fact that the physician saw most of the cases where the cæcum was at fault and some where the recurrent attacks were due to the appendix, while the surgeon met with those in which the appendix was the cause of suppuration or perforation and where obviously nothing short of operative interference would be of any avail. These two conditions were not however clearly defined pathologically, but were spoken of under one name, so that one side, finding the so-called cases of typhlitis do well without operation, supported treatment by simple measures, while the other side, finding that cases known by the same name required operation, advocated that as the proper treatment—the fact being that two varieties of disease were grouped under one name, and consequently it was impossible to apply a general rule of treatment to both. It is only by a division pathologically into those where the disease is due to the cæcum, or typhlitis, and those where it is due to the appendix, or appendicitis, that we can see on what lines to proceed. If clinically the case can be diagnosed as typhlitis, then there is no doubt that operative interference is seldom called for; but if, on the other hand, appendicitis is a correct diagnosis, the question of operative interference may present itself under two circumstances: firstly, for the evacuation of pus from a local abscess or from the general peritoneal cavity; and secondly, for the relief of relapsing attacks. As the formation of a correct diagnosis between typhlitis and appendicitis is a matter of considerable practical moment, what are the signs on which such a distinction can be based? It is always a difficult matter to draw clear and early distinctions between two diseases which have up to a certain stage a considerable resemblance to each other; but when, as in the conditions under consideration, we remember that the cæcum and appendix are situated in the same region and that a certain amount of localised peritonitis is common as an early symptom when inflammation spreads from the interior of either, the difficulty of accurately determining the starting point of the disease is considerably increased. It is only by knowing certain points on which careful inquiry should be made and by a judicious weighing of the evidence derived from an examination of the patient that we can come to any conclusion. The points for careful inquiry are as follows: 1. The onset of the disease. In typhlitis this is less sudden and less marked than, at any rate, in many cases of appendicitis. 2. Pain in typhlitis is less severe and more confined to the region of the cæcum; it is not so diffused over the abdomen nor does it tend to radiate to distant parts. 3. Tenderness in typhlitis is more local, but there is not any one spot where *excessive* tenderness can be elicited by digital pressure, as can be done in the early stages of appendicitis at McBurney's spot. 4. The swelling in typhlitis appears early; it is larger, less fixed, more doughy and more easily felt than in appendicitis. It cannot be felt from the rectum. 5. The febrile disturbance as indicated by the temperature and pulse is less in typhlitis than in appendicitis. 6. The progress of the case. In typhlitis many cases soon tend to get well. In appendicitis, while undoubtedly some recover under general treatment, many others steadily increase in severity until pus is formed, while others relapse. 7. A previous history of many attacks would rather favour a diagnosis of typhlitis, especially if a reliable history could be obtained of these being accompanied by swelling in the right iliac fossa. Recurrent attacks of appendicitis may occur without there being any evidence of tumour, and there is moreover a tendency in many cases for these attacks to terminate in suppuration or perforation. Dr. Weir records the examination of thirty cases of acute perforative appendicitis following recurrent attacks and the explosion into abscess or general peritonitis occurred in twenty-two before the third attack and only once after the fifth. 8. A previous history of constipation is suggestive of typhlitis. But it must be remembered that owing to the varying degree of the severity of these attacks there is in many cases considerable difficulty in coming to a satisfactory diagnosis.

Looking at the records of cases, it seems that if the symptoms are due to the appendix surgical interference is called for (1) in all cases where the general peritoneal cavity is involved; (2) where there is evidence of local abscess; (3) where in the course of an acute attack symptoms progress in spite of treatment and where there are good grounds to believe that pus is being formed, though it is too deeply situated to give rise to fluctuation. These cases form perhaps the most important group, as by the early opening of a deep-seated and as yet small abscess a general peritonitis may be avoided. It may be asked whether deep-seated pus can be detected by the aspirating needle. No one would deny that at times it may, but on all considerations it is better not to use the aspirating needle; far more useful information is obtained by an exploratory incision. Puncture by a needle here is by no means free from danger, nor is the information it gives at all reliable, unless of course pus is drawn. (4) In those relapsing cases where the restoration to health is incomplete and the patient is rendered unfit for the duties of life. In these cases there seems to be good reason to believe that the patient's safety is best consulted by an exploration and possible removal of the appendix in an interval between the attacks.

FOOTBALL CASUALTY.—A youth aged nineteen, while playing a game last week at St. Mary's-row, Birmingham, sustained a dislocated ankle.

MEDICAL MAGISTRATES.—Mr. Robert Parry, L.R.C.P.Lond., M.R.C.S., of Carnarvon, and Mr. Anthony Herbert Martin, M.R.C.S., L.S.A., of Evesham, have been placed on the Commission of the Peace for the Borough of Carnarvon and County of Worcester respectively.

MYOSITIS OSSIFICANS.

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IN the following paper I propose to consider the present position of our knowledge of the fortunately rare disease known as myositis ossificans. Comparatively few cases have been so far recorded, but those which have been observed have presented a chain of symptoms of great interest and have excited so much speculation as to their causation that the bibliography of the subject, a list of which is appended, is already extensive. The principal contributions of English writers to our knowledge of myositis ossificans are a paper by Lendon, read before the First Intercolonial Medical Congress, Adelaide, 1887, and one by the late Mr. Sympson. The latter gentleman some time before his death kindly sent me further details of his case, with permission to use them for embodiment in this paper. Mr. Willett has also kindly placed at my disposal the notes of a case under his observation at St. Bartholomew's Hospital.

Further Progress of Mr. Sympson's Case, Brit. Med. Jour., vol. ii. 1886, p. 1026.

Jan. 24th, 1887.—Two bosses the size of filberts are now present to the inner side of that situated over the posterior superior spine of the right ilium. The boy is in good health and has gained flesh. The parents have now removed to a village six miles from Lincoln.—Aug. 7th: The boy has fallen over a bucket and fractured both bones of his left forearm at the junction of the lower with the middle third. The parents have returned to Lincoln.—Aug. 24th: A hard boss the size of a cobnut has formed at the insertion of each pectoralis major and the anterior margin of each splenius is tense and indurated. The boy suffers no pain and his general health is excellent.—January 17th, 1891: The fracture united well. Three weeks ago the boy complained of pain and stiffness of the right side of his neck and of a swelling below the right ear. The pain has now left him, but there is a boss the size of a walnut in the upper third of the right sterno-mastoid muscle. There are also six nodules the size of buck shot in the latissimus dorsi between the left scapula and the spine. He continues in good health.

Additional Note kindly sent me by Mr. E. Mansel Sympson.

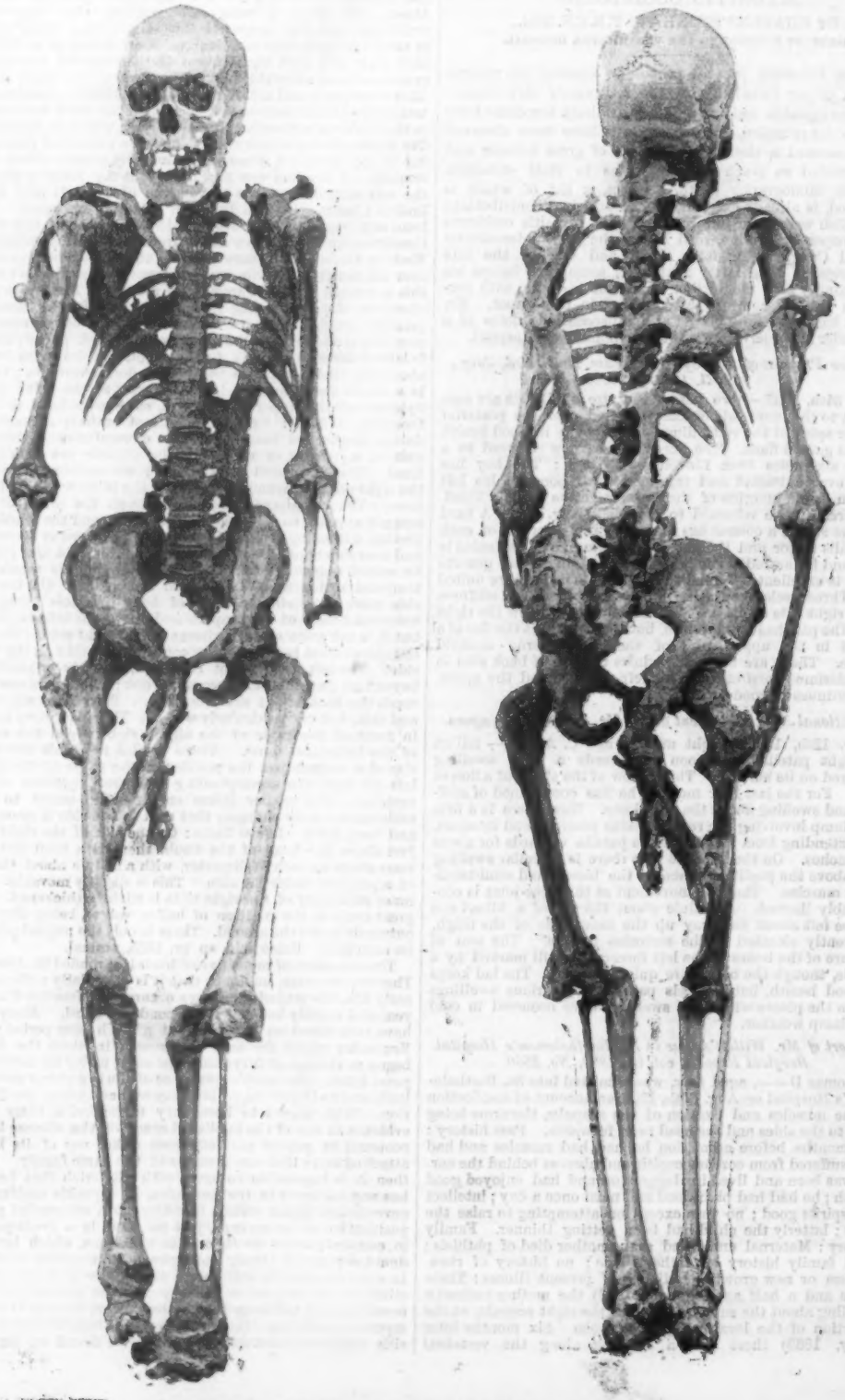
Nov. 12th, 1892.—Eight months ago C. A. M—— fell on his right patella and soon afterwards a hard swelling appeared on its surface. This is now of the shape of a limpet shell. For the last four months he has complained of stiffness and swelling above the left knee. Now there is a firm hard lump involving the rectus, vastus externus and internus, and extending from just above the patella upwards for about four inches. On the left side also there is a similar swelling just above the popliteal space in the biceps and semi-tendinosus muscles. Thus the movement at the knee-joint is considerably limited. A nodule about the size of a filbert can also be felt about half-way up the inner side of the thigh, apparently situated in the sartorius muscle. The seat of fracture of the bones of the left forearm is still marked by a nodule, though the bones are quite straight. The lad keeps in good health, but he feels pain in the various swellings and in the places where the swellings have occurred in cold and damp weather.

Report of Mr. Willett's Case in St. Bartholomew's Hospital Surgical Reports, vol. iii. 1886, No. 2556.

Thomas D——, aged four, was admitted into St. Bartholomew's Hospital on Aug. 30th, 1886, on account of ossification of the muscles and fixation of the scapulæ, the arms being kept to the sides and the head bent forwards. Past history: Six months before admission he had had measles and had also suffered from eczema capitis and abscess behind the ear. He was born and lived in Haggerston and had enjoyed good health; he had had plain food and meat once a day; intellect and spirits good; no pain except on attempting to raise the arms; latterly the child had been getting thinner. Family history: Maternal uncle and grandmother died of phthisis; good family history on father's side; no history of rheumatism or new growths. History of present illness: Three years and a half ago (January, 1883) the mother noticed a swelling about the superior angle of the right scapula, at the insertion of the levator anguli scapulæ. Six months later (July, 1883) there was a swelling along the vertebral border of the bone and about the inferior angle, which the mother attributed to the shoulder "growing out." About this time it was also noticed that the boy could not put his spoon to his mouth, not being able to raise his right arm sufficiently. He fell out of a child's high chair and hurt himself, but the mother did not know exactly where; after this he kept his head to the right side. About two years and a half ago (January 1884) a prominence was noticed in the left erector spinæ and the child was taken to the Children's Hospital, Hackney-road, where he remained five weeks, during which time no increase was noted (according to the mother's account) in the bony growth about the scapula. A swelling was now noticed at the lower angle of the left scapula and the movements of the left arm were limited; before this the left arm was the one used. The head now began to come over and lean towards the left side. Condition on admission: Right frontal eminence enlarged. Neck on the left side: there is slight fulness and a hard growth over the fourth and fifth cervical transverse processes; over this is a small movable tumour like a bursa. There is caput obstipum, the head being inclined to the left, the mastoid process brought nearer to the clavicle. The sterno-mastoid muscle is stretched over the swelling mentioned. Spine: There is lateral dorsal curvature to the right, the deviation being about two inches opposite the eighth dorsal vertebra; there is a slight compensatory lumbar curve to the left; some kyphosis of the upper dorsal spine, so that the head is bent forwards. Chest: Respiration almost entirely abdominal; during inspiration there is only a circumferential thoracic gain of a quarter of an inch. The scapulæ are both quite fixed. There is a hard growth along the vertebral border of the right scapula, which is largest at the inferior angle of the bone. The latissimus dorsi as it covers the angle of the scapula appears to be changed into bone, and the tendinous portion extending from this point to the humerus is ossified and contains hard irregular nodules. The right arm cannot be raised quite to the horizontal; the fingers touch the temporal region and easily reach the mouth. On the left side there is a similar mass of bony hardness along the vertebral border of the scapula and above the inferior angle, but it is not quite so extensive as on the right side. The left latissimus dorsi is in a similar condition to that on the right side. The left arm cannot be raised, actively or passively, beyond an angle of 45° from the trunk; the fingers can just reach the mouth, but not the head. Both arms are small and thin, but not particularly wasted. There is a bony nodule in front of the angle of the eighth right rib in the course of the latissimus dorsi. There is also a nodule about the size of a walnut over the position of the angle of the eighth left rib and the corresponding transverse process of the vertebra. The erector spinæ on each side seems to have undergone a bony change; that on the left side is prominent and very hard. Lower limbs: On the side of the right knee just above the head of the fibula there is a hard plate-like mass about an inch in diameter, with a nodule about the size of a pea just under the skin. This is slightly movable. The inner tuberosity of the right tibia is slightly thickened. Each great toe is in the position of hallux valgus, being displaced outwards under the second. There is only the ungual phalanx on each side. Urine acid, sp. gr. 1025, normal.

The causation of myositis ossificans is shrouded in obscurity. There is, however, no doubt that it is essentially a disease of early life, the majority of cases occurring before the fifteenth year and usually between the second and third. Many cases have been noted as beginning at a much later period; thus Kronecker relates the case of a woman in whom the disease began at the age of fifty-four: she came under his notice two years later. The early appearance of the symptoms naturally leads one to inquire as to heredity and congenital predisposition. With regard to hereditary transmission there is no evidence in any of the published cases of the disease having occurred in parent and offspring alike, nor of its having attacked more than one member of the same family. While then it is impossible to agree with Helferich that heredity has any influence in the causation of myositis ossificans, it nevertheless seems certain that there is a congenital predisposition to its occurrence, just as there is a predisposition in certain persons to rheumatic affections, which have undoubtedly many strong analogies with myositis ossificans. In some people it is well known that there is a special proclivity to the formation of bony growths, pointing to some constitutional tendency to bony formation, such as is seen in myositis ossificans. In Billroth and Zollinger's case of myositis ossificans numerous osteomata were found on the bones

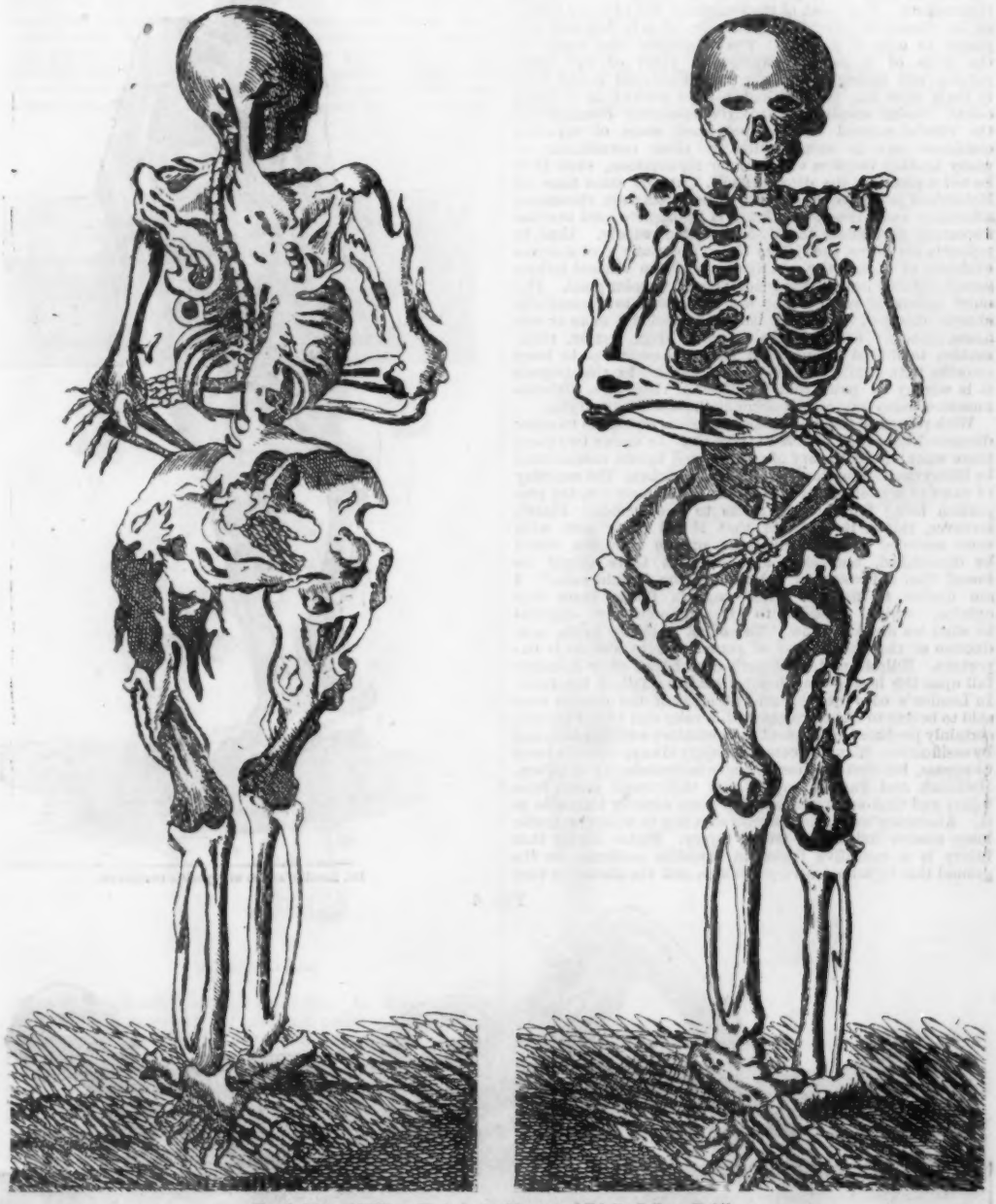
FIG. 1.



From the specimen in the Museum of the Royal College of Surgeons, England.

and it is specially noted that these were true osteomata and not ossific deposits at the tendinous insertions. Skinner, Eberth, Minkewitsch and others have noted similar cases. Admitting, however—and it seems impossible to doubt it—a constitutional predisposition to the formation of new bony tissue, we are not carried very much further, since we know nothing as to the nature of such predisposition or of the causes which induce it. In endeavouring to elucidate this point in the etiology of myositis ossificans it is necessary to review the family histories of the patients. Unfortunately in many cases this has not been mentioned or only very shortly so, but I think we may fairly assume that in such cases there was nothing noteworthy in the history, as all the recorded cases are by good observers who would pay full attention to any important feature of the case. It would appear that in some cases at least there was a distinct family

FIG. 2.



The skeleton of William Clark, in the Museum of Trinity College, Dublin.

history of rheumatism (London, Sympson) and in many the onset or progress of the disease was very similar to muscular rheumatism. In Henry's case the disease began with acute arthritis of the wrist and elbow; Minkewitsch met with the disease in a girl following rheumatic arthritis of the left knee. In nearly all the cases rheumatic pains are complained of. Hawkins was of opinion that the disease was of a rheumatic nature. Lieutaud held a necropsy on a case of myositis ossificans, the patient having always suffered from rheumatism. The onset of the symptoms has in many cases, as in rheumatic affections generally, clearly followed exposure to cold or a chill. Thus Hawkins' case began in the loins of a patient twenty-two years of age after getting wet through. Testelin and Danbressi relate that in their case the patient had always worked in a damp cellar, under conditions strongly favouring rheumatism. On careful perusal of the published cases of myositis ossificans one is struck with its close resemblance in many leading respects to muscular rheumatism, even if it be not a phase of the disease itself. At the same time, as Haltenhoff justly points out, the analogy between rheumatic affections and myositis ossificans is incomplete and in some important particulars the diseases differ widely. Thus in myositis ossificans the joints never show any post-mortem evidence of disease nor are there any of the visceral lesions seen in rheumatism and the general health remains good. The chief points of resemblance are that both are essentially chronic diseases, liable to advance by periodic more or less acute attacks; both lead to muscular degeneration, rheumatism to fibroid change and myositis ossificans to bony growths with a minimum of fibrous tissue. In this respect it is worthy of note that in chronic rheumatic arthritis numerous bony outgrowths occur at the articular margins.

With regard to the relations of myositis ossificans to other diseases I have been unable to trace any. In one or two cases there was a family history of phthisis and in one case related by Bókay the disease was associated with rickets. The majority of cases of myositis ossificans occur in the male sex, the proportion being four or five males to one female. Pinter, however, thinks it probable that if all cases met with were recorded this preponderance of the male sex would be diminished, and even suggests that there might be found "an unfavourable balance on the female side." I am unable to find on what grounds Pinter bases this opinion, which appears to be diametrically opposed to what we already know. The effect of injury in the production of the disease and of periodic acute attacks is important. Billroth and Zollinger's case began after a violent fall upon the hands, Munchmeyer's after a fall on the back. In London's case the first evident signs of the disease were said to be due to chastisement with a ruler and trivial injuries certainly produced subsequent inflammatory swelling followed by ossification. Skinner notes that injury always caused a lump to appear, but that the disease began independently of injury. Helferich and Partsch report that their cases arose from injury and that successive attacks were directly traceable to it. Abernethy mentions the case of a boy in whom an ossific lump always followed a trivial injury. Pinter denies that injury is a causative factor in myositis ossificans on the ground that injuries are very common and the disease is very

FIG. 3.

Dr. London's case of myositis ossificans.

FIG. 4.

Dr. Lond°n's case.

are; but, as pointed out by Lendon, it is the peculiar constitutional diathesis which leads to such untoward results from otherwise harmless injuries. Pinter in support of his opinion mentions that in many cases, carefully watched by competent observers, there was no evidence connecting myositis ossificans with injury. On the other hand, we have numerous examples by equally good observers showing the contrary and while freely admitting that injury is not a necessity as a causative agent, it cannot be doubted that in some cases at least it plays an important subsidiary action. Nicoladoni and Hayem suggested that the condition was dependent upon central changes in the spinal cord or in the peripheral nerves. Schultze has, however, conducted investigations on this point in two cases with negative results. In one case he found the spinal cord of good size and well-developed and microscopic

FIG. 5.

Dr. Lendon's case.

examination showed nothing abnormal. In Munchmeyer's case Schultze examined the cord and peripheral nerves with a like result. In Lendon's case the cervical cord was examined, but this "revealed nothing unusual except a sprinkling of corpora amylacea."

Pathological anatomy.—That ossification may take place in muscles which from long continued irritation have been the seat of chronic inflammation is well known. Ossification of the adductors of the thigh in cavalry soldiers and occasionally in shoemakers and the drill bone in the deltoid of the old Prussian infantry are cases in point. Such instances have, however, nothing to do with myositis ossificans. It is well established by many observations that myositis ossificans is primarily a disease of the cellular tissue binding the muscular bundles together; the muscular tissue itself takes no active part in the process, but undergoes degeneration and atrophy. The name therefore is open to objection and misleading and it would be more correct to speak of the disease as an interstitial myositis ossificans. It is a noteworthy fact that the disease begins first in the muscles of the back and neck, the favourite sites of ordinary muscular rheumatism. Affecting the latissimus dorsi and the trapezii, with the rhomboids, deeper back muscles and muscles of the neck, the disease gradually spreads to the limbs. First affecting the muscles of the shoulder and the pectorals, the scapulæ become fixed to the chest and the arm is rendered useless. The upper limb is affected in most cases in advance of the lower and the disease spreads from the proximal to the distal end. By the gradual ossification of the pectorals, latissimi, trapezii &c. the chest becomes enveloped in a dense bony cuirass, so that the thoracic respiratory movements are much hampered or altogether lost (Skinner, Minkewitsch.) This fixity of the chest is increased

FIG. 6.

Dr. Lendon's case.

by ossification of the costo-vertebral ligaments (Lendon). The muscles of the abdomen, the diaphragm and those essential to life are hardly ever affected and then only to a small extent. When the muscles are first attacked there is only a sense of stiffness; this, however, gradually increases, the hardness of the parts becomes more marked, bony masses in adjacent muscles fuse and the rigidity is absolute, the patient in advanced cases being rendered almost as rigid and helpless as a block of marble. In the case of the spinal column it is not infrequently deprived of all movement and curved to one side or to the other; this is in part due to the ossific plates in the muscles, but more especially to ossification of the various ligaments and synostosis of the vertebræ, as well shown in

London's case. The joints become fixed, not by true bony ankylosis, but by the rigid bars of bone formed in the substance of the muscles acting upon them. I cannot find any mention of actual disease of the joint surface. London records that in his case the joint surfaces were but slightly altered—"the hyaline cartilage was replaced by a fibroid substitution and in the left knee it was slightly uneven and the condyles were soft and spongy." The position of the limbs and joints varies according to the muscles affected. Ossification of the muscles of the neck and of the vertebral ligaments renders the head fixed and slightly flexed by involvement of the sterno-mastoids. The muscles of mastication are frequently affected, the lower jaw becoming completely immobile, so that the patient can only be fed through a gap in the dental arch (Testelin and Danbressi) or after the removal of a tooth for the purpose (Helferich, Munchmeyer). In Bókay's case the ocular muscles were affected and Billroth and Zollinger found a calcareous plate in the choroid coat of the eye.

A glance at the accompanying figures (Nos. 1 to 6) will give a good idea of the extent of the disease. The osseous formations are many of them independent of the skeleton,

FIG. 7.

M ctyl and hallux valgus. (Mr. Sympson case of myositis ossificans.

but in some parts they are attached to it, spreading into the muscular insertions as pointed, stalactite-like masses. As already stated, true spongy exostoses are sometimes met with. Usually in the form of flattened, perforated plates, the bony tissue may be in nodular masses or sharp and pointed. From pressure and irritation the skin and cellular tissue over the affected muscles may slough, forming large, foul sores, adding much to the sufferings of the patient and exposing him to the risk of septic absorption. In London's case the discharge from these sores contained gritty portions of bone and small sequestra. Sometimes large, deep abscesses are met with, doubtless due to the irritation set up by the sharp spiculæ of bone (Rogers). The bone found in myositis ossificans has been examined microscopically and chemically by some observers, the results in each case being similar. Dr. Poggiale made a chemical examination of a dried portion of the new bone and found that in 100 parts there were 58 per cent. of organic matter and 42 per cent. inorganic, accounting for the comparative softness of the bone as compared with normal osseous tissue. Of the organic material he found cartilage 54·3 and vessels 3·70, while the inorganic part consisted of calcium carbonate 8·66, calcium phosphate 32·99 and magnesium phosphate 3·25. Poggiale was unable to find any traces of alumina, silica and the oxides of iron and manganese which have been described by Bazelius, Fourcroy and Vaugelin. Hawkins examined a portion of bony material which he removed by operation from the back of his patient. He found that the muscular fibres were inserted into it just as muscles are inserted into skeletal bones. The piece removed consisted of firm bone, but a small piece was cartilaginous; it was covered with periosteum and consisted of an outer firm shell and an inner cancellous spongy tissue. Microscopically it presented the characters of true bone. Hamilton also found the new tissue chemically and microscopically like true bone. This skeleton is in the museum of Steevens's Hospital, Dublin.

With regard to visceral lesions, I am unable to find any mention of pathological conditions which could in any way be associated with this disease, nor should we, seeing that the general health remains good, expect otherwise. In most cases the urine is reported as being normal. Pinter records a quantity of brick-dust deposit; Munchmeyer notes a diminution of the quantity of phosphates by one-half, but adds that the urine was only examined over a period of six days. Pinter in one case recorded by him states that the lime and phosphates were diminished to one-tenth of the normal, and in a second that kreatinin, lime and magnesia salts were "decidedly diminished." A curious and rare congenital deformity of the thumbs, great toes or both has been noted in connexion with myositis ossificans by Helferich, Partsch, Kümmell, Pinter, Von Gerber, Uhde, London, Sympson, Godlee and Willett. Helferich appears to have thought this rare condition of hallux valgus and microdactyle was a mere coincidence, but since the publication of his case so many others have been noted that it seems impossible to suppose that coincidence is sufficient to explain the association of two rare conditions. At the same time, it must be admitted that no explanation of the connexion can be given. The accompanying figure (7) is from a photograph of Sympson's case, in the report of which he says "the head of each first metatarsal bone is large and prominent and the great toe on either side is small, apparently consists of only one phalanx and is directed towards the outer border of the foot." In this case no mention is made of any similar condition of the thumbs as mentioned by Godlee, Helferich and Partsch.

General symptoms.—The general health of those suffering from myositis ossificans usually remains good. The onset of the disease and of fresh attacks is in most cases, but not in all, accompanied by slight fever, general malaise, pain (often severe), tenderness and swelling of the part attacked. The swelling is red and the superficial veins are engorged. In a few days the symptoms subside—the temperature falls, the swelling diminishes but does not disappear, permanent stiffness remains and the exudate hardens and gradually becomes transformed into a bony mass. In some cases the onset is more insidious; thus in Helferich's case and in Willett's, reported above, the nodules developed in the muscles of the back without pain or obvious acute inflammatory symptoms. The lymphatic glands in the neighbourhood of the affected part frequently become swollen and tender, but subside with the subsidence of the irritation; in other cases they remain permanently enlarged. In some instances the inflammatory exudate is converted into scar tissue, the muscle undergoing fibrous but not bony change. Fibrillar contractions are often seen in the affected muscles, due doubtless to the irritation caused by the bony plates. Munchmeyer records in his case a sensation of coldness in the limbs with actual loss of temperature. Œdema is not uncommon. The subjects of myositis ossificans are, on account of the impeded thoracic movements, especially liable to chest affections and not a few of them die of pneumonia or phthisis. Later on in the disease, when bed-sores and ulcers have formed over the bony projections, the general health suffers severely from the prolonged and profuse discharge, accompanied by repeated septic absorption.

Treatment.—In spite of all treatment the disease makes steady progress and nothing has so far proved of any real value. Improvement due to treatment must not be confounded with remissions and temporary quiescence of the disease. Mercury, iodide of potassium, sarsaparilla, iron, mineral acids, colchicum, arsenic, phosphorus and numerous drugs have been found useless. Munchmeyer found that the induced current did harm. Baths have in some few cases been followed by temporary benefit. Rogers endeavoured to induce by a salted diet a condition similar to scurvy. Under

this treatment it is related that some of the bony nodules became absorbed, but the patient suffered so much in health from the treatment that his condition was rendered worse than before. In Hawkin's case local blistering always did good, the pain and swelling being relieved; but he does not state that it arrested the bony formation. The avoidance of cold, damp and especially injury seems specially indicated. Further than this, the patient must be treated on general principles. Excision of the bony nodules does no good.

Conclusions.—1. The disease is associated with a congenital, but not hereditary, predisposition to the formation of bone in inflamed parts. 2. It is closely allied to muscular rheumatism and rheumatoid arthritis. 3. It runs an essentially chronic course over many years, steadily progressing, but with distinct remissions, and may extend over a long period, beginning usually in early life, especially in the male sex. 4. The muscles of the back and shoulders are the earliest and most extensively affected; those muscles of great importance to the life of the individual almost always escape. 5. Local injury must be accepted as a great causative factor in producing fresh foci of disease. 6. It is sometimes associated with hallux valgus and microdactyle. 7. Death usually occurs from pulmonary complications or suppuration and sloughing with septic absorption. 8. Treatment is useless.

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Harley-street, .

A CASE OF MYOSITIS OSSIFICANS.

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A BOY aged nine years was brought to me at the North-Eastern Hospital for Children in July, 1891, with the request that, if possible, something might be done to increase the mobility of his neck and his arms, which were very stiff. His mother gave the following account of his disease. When he was six months old the child was brought to the North-Eastern Hospital for Children because a lump was forming on the lower angle of his right scapula. No operation was performed. Six months later several nodules began to appear on the boy's ribs. During his second year his right arm began to get fixed and the lump on his scapula increased in size. About this time it was noticed that the boy's neck was getting stiff, but no bony masses were detected in it. During his third year a hard lump began to form between the right iliac crest and the last rib and the other nodules increased slightly in size. During his fourth year the boy fell and cut his right knee. The wound healed quickly, but a hard nodule formed a little below and to the right of the patella. The boy's neck became a little stiffer and was carried rather forwards, but as yet no hard bands were detected in that region. One or two lumps appeared about the inferior angle of the left scapula and one above the left iliac crest. During his fifth year the range movement of the boy's left arm became restricted and he began to have difficulty in bending his back. During his sixth year his neck got stiffer and bony bands along the front of his neck were then noticed for the first time; fresh nodules were also observed on his ribs. During the seventh, eighth and ninth years no fresh bony growths were detected; but the stiffness of the boy's neck and back and the limitation of the movements of his arms increased, and now he began to walk stiffly. The boy's general health had always been good; his appetite was good and he slept well; he had had whooping-cough, chicken-pox and measles, but not scarlet fever; he had not had rheumatic fever and he had not complained of pains in the muscles affected. The family history was very good; the boy's father and mother were both strong and healthy, as also were their three other children. The boy is continually falling on his face, for if he trips over anything he cannot prevent his fall, and if he does he cannot protect his face owing to the stiffness of his arms.

Present state, July 8th, 1891.—The boy walks slowly and very stiffly. He can stand quite steadily, but a very slight push is enough to upset him. The movements of his head are extremely limited both upwards and downwards and to either side. His head can only be rotated enough to bring his chin to a vertical line carried upwards from the sterno-clavicular articulations and his chin cannot be raised or depressed more than a quarter of an inch. His neck is quite stiff. The skin between the chin and the sternum stands off in a prominent fold and close beneath it there is a bony band. This band commences above in an irregularly shaped boss of bone about the size of a walnut, which is fixed to the inferior border of the body of the lower jaw just to the right of the symphysis and extends as a rounded hard cord to the right of the cricoid cartilage, where it expands into a flat bony plate which extends across the middle line. From the angles of this plate below there pass two bony cords, that on the right side terminating in a rounded knob just above the sterno-clavicular articulation, whilst that on the left side takes a more oblique course and ends in a similar manner just above the clavicle, opposite the interval between the two heads of the sterno-mastoid muscle. Both sterno-mastoid muscles stand out prominently and are very firm, but no spicules of bone can be felt either in them or the lateral muscles of the neck. The right arm can be raised from the trunk through an angle of 45°, but with this limited range of abduction the scapula moves too. The arm can be brought to the side, but it cannot be carried backwards beyond the posterior axillary line; it can be carried forwards for about 45°. The restricted movement appears to depend on the contracted state of the muscles in the axillary folds. Along the posterior axillary fold is a scar one inch and a half in length, which resulted from an operation performed at the Holloway Hospital, where a piece of bone was removed when the boy was in his third year. Beneath the scar there is a bony plate, which

commences below in a mass of bone continuous with the inferior angle of the scapula and extends upwards nearly to the bicipital groove. It appears to be situated in the lattissimus dorsi muscle; it is slightly movable. The lower border of the pectoralis major muscle is shortened and feels like a dense fibrous cord. There is a hard swelling on each of the rib cartilages where the muscle arises from them. The fibres of the deltoid muscle are very tense and their outline is plainly visible beneath the skin, but no masses of bone can be felt in the muscle. The outer bicipital ridge is very prominent. The movements at the elbow-joint are not restricted. No bony spicules can be felt in the muscles of the upper arm and the only mass which can be detected in the forearm is situated on the radial border about two inches above the styloid process. It is an oval mass measuring about one inch in length and half an inch in breadth; it has no bony attachment to the radius; it is slightly movable from side to side and appears to be situated in the lower part of the supinator longus muscle. The fingers and thumb can be moved freely. The left arm, like the right, can only be raised 45°, but it cannot be brought to the side of the body. It cannot be carried forwards beyond the mid-axillary line, but it can be extended for the normal distance. In the situation of the teres major muscle there is a thick band of bone which extends from the inferior angle of the scapula almost to the humerus, but it has no bony attachments either to the latter or to the scapula. At the bend of the left elbow there is a projection formed by an irregular nodule of bone about the size of a Barcelona nut; this appears to be connected with the biceps tendon. Still deeper there is another mass, which seems to involve the lower fibres of the brachialis anticus muscle. With these exceptions the muscles of the upper arm, forearm and hand of the left side are unaffected.

The spine is very rigid throughout and it is only in the lumbar region that any mobility can be made out. Just to the left of the fifth and sixth dorsal spines and probably in the lower fibres of the trapezius muscle there is a rounded plate of bone measuring about three-quarters of an inch in length and half an inch in breadth. On the left side there are several small bony nodules situated apparently in the latissimus dorsi muscle, and three of them are fixed to the ribs and seem to occupy the slips of muscle which arise from them.

On the right side of the spine in the lumbar region there is a flat plate of bone which is movable from side to side. It extends from just above the crest of the ilium to the last rib and laterally from just to the right of the middle line outwards for about two inches. It appears to occupy that part of the aponeurosis of the latissimus dorsi muscle which blends with the posterior layer of the fascia lumborum. The anterior border of the latissimus dorsi muscle stands out prominently, and in this situation, close beneath the skin, there is a large mass of bone of very irregular shape, which is attached below to the crest of the ilium and extends upwards rather behind the mid-lateral line of the trunk and overlaps the ribs above. Slightly above and behind this mass there is another one of much smaller size; it is movable from side to side. No bony masses can be felt in the muscles of the anterior abdominal wall. The movements of the hip-joints are impeded in all directions. No bony plates can be felt in the muscular fibres of the glutei; but just below the great trochanter, on the outer and back part of the right thigh, there is a flat plate of bone about three inches in length and one inch in breadth at its widest part. It lies close beneath the skin and is slightly movable. It appears to occupy the fascia lata of the thigh, where the lower fibres of the gluteus maximus are inserted into it. There is a smaller plate of bone on the left side in a similar situation; it is apparently continuous with the femur. No bony masses can be felt in the muscles of the thighs, but in each there is a strong spicule of bone extending from the adductor tubercle upwards for about two inches in the tendon of the adductor magnus. They are both firmly fixed at their lower ends. There is a movable plate of bone of irregular shape, measuring about three-quarters of an inch in diameter, situated between the lower end of the condyle of the left femur and the patella; and there is a smaller movable plate of bone just above and in front of the outer tuberosity of the right tibia. Both these plates of bone appear to occupy the fibrous expansion derived from the extensor muscles. The knees cannot be fully extended, but flexion is free. The inner borders of both tibiæ present bony growths just below the tuberosities. The boy's parents were anxious that if possible something might be done to give him freer movement of his left arm and his neck.

On July 21st, 1891, an incision was made along the anterior border of the osseous band in the left posterior axillary fold. The teres major muscle was exposed and the bone was found to occupy the substance of this muscle in nearly its whole extent, but it was not fixed either to the scapula or the humerus. It was dissected out. The mobility of the arm was a little increased. The bones were also removed from the front of the neck. They were superficial to the deep fascia and apparently in the platysma muscle. The mobility of the neck was not at all improved owing most probably to ossification of some of the posterior muscles of the neck. The bones removed had the naked eye appearances of physiological osseous tissue. They were unfortunately mislaid before a microscopic examination of them had been made. The increased mobility of the left arm which was obtained by the operation was soon lost.

The boy was examined again on Dec. 24th, 1891. He had got stiffer and more bony. Bones had formed again in both the situations from which they had been removed. In the neck there was a strong spicule of bone, which was attached to the inferior border of the lower jaw just to the right of the symphysis and extended to just above the right sterno-clavicular articulation below. Its lower extremity was free. It was situated immediately beneath the skin. The right arm could only be abducted 15°, flexed 15° and extended just beyond the mid-axillary line. In addition to the plate of bone previously noticed in the posterior axillary fold there was a large flat bony plate occupying the greater part of the pectoralis major muscle. It was not fixed by bone either to the thorax or the humerus.

The left arm could be abducted 45°, flexed 15° and extended 45°; the muscles of the anterior axillary fold were very small and firm, but no bony deposit could be felt in them; the posterior axillary fold was occupied by a bony mass, which commenced in an irregular nodule attached to the inferior angle of the scapula and extended forwards almost to the humerus, but was not attached to it; the bone lay immediately beneath the scar of the wound, through which a similar plate of bone had been removed fifteen months before.

Harley-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASE OF MULTIPLE VISCERAL INJURIES OCCASIONED BY A CRUSH, WITH TRIVIAL MARKS OF VIOLENCE ON THE SURFACE OF THE BODY.

(Under the care of Mr. HULKE.)

THE occurrence of severe visceral injuries inflicted by external mechanical violence, unattended with manifest or concurrent or with but very trifling marks on the surface of the trunk, is a circumstance frequently noticed by writers on military surgery. This class of injuries probably occurred more often in bygone years when spherical cannon shot discharged with relatively low velocity was employed. It is well-known that modern authors are agreed that probably most of the instances of death popularly ascribed by soldiers and bluejackets to the effects of the "wind" of a closely passing cannon shot are, in fact, due to actual impact of an almost completely spent ball on the combatant's body. Typical examples were seen in the course of the siege of Sebastopol. In two of these, brought to the "General Hospital in the Front," the clothes were but slightly damaged and the abdominal wall bore no mark of injury; but the liver and spleen were comminuted into pulp and the intestines much lacerated. Perhaps in the larger number of such injuries the abdomen is the region implicated, but the thorax also offers examples. Thus amongst many men wounded by the explosion of a large magazine at Inkermann and the heavy firing which imme-

diately followed this, who were brought to the General Hospital, was a private in a British Line regiment whose left arm was shattered by a piece of an exploding shell. Large quantities of bright frothy blood oozed bubblingly from his mouth, nearly choking him, for he had barely strength to cough and he could only speak in a scarcely audible, broken whisper. Yet two small lacerated wounds in the integument near the lower angle of the scapula were the only marks of violence on the outer surface of his chest. He succumbed about twenty-four hours after receiving the injuries. At the necropsy these wounds were found to be superficial and not to penetrate the chest wall. The costal pleura was not torn, but it was found entire over two transversely fractured ribs. The lung, however, was extensively torn by large rents which passed from its base upwards and from its outer surface towards its root, opening large bronchi and bloodvessels. It is suggested that this very extensive damage was caused by forcible compression of the chest at the moment of full expansion of the lungs by the shattered arm violently driven against the chest wall. In civil life similar injuries are not unfrequently caused by machinery; by the buffers of two railway carriages nipping an incautious porter whilst coupling; or by a person being squeezed against a wall by the nave of a dray. In the following case very extensive fatal lacerations of several abdominal organs were produced by a crush which the sufferer inadvertently brought on himself in a manner that recalls a mode of execution judicially decreed in the early Middle Ages as the penalty for crimes regarded as peculiarly atrocious, and known as "pressing to death"—the *peine forte et dure*.

W. C——, aged thirty-seven years, was admitted into Founder ward on June 22nd, 1892, in the early forenoon. The surface of his body was bedewed with beads of cold sweat, the temperature was distinctly subnormal, the pulse was 100°, very small and weak, and the pupils were dilated and motionless. He was perfectly conscious and complained of great pain. In short, his condition was extreme collapse. Across his back, over the lower ribs, particularly on the right side, were grazes. Lying on his right side this side of the abdomen was non-resonant when percussed. Lying prone under a lift for the purpose of oiling the cylinder piston he had inadvertently set the cage in motion, and this descending had crushed him upon the floor before he could extricate himself. A workman who went to his aid and reversed the cage said that the space between the bottom of the cage and the floor could only have been a very few inches. The house surgeon gave a subcutaneous injection of sulphate of ether and ordered small quantities of brandy to be given at intervals regulated by its apparent need. He also passed a catheter and drew off half an ounce of clear normal urine untinged with blood. The man said that he had emptied his bladder about twenty minutes before the accident. His condition continued without notable change throughout the day. At 8 P.M. the catheter (a soft red rubber one) was again passed and two drachms of slightly blood-tinged urine drawn off. Next morning (June 27th) the collapse appeared rather less extreme. He had great thirst and his abdomen was tympanitically swollen, except the right side, which continued dull. At noon one ounce of normal urine was removed with a soft catheter. In the afternoon he sank and died at 5.45 P.M. The extreme collapse; significant waxy, bloodless appearance of the skin and also of the buccal mucosa; coupled with the dulness of the most dependent part of the abdomen—the right side—and the great thirst clearly indicated an extensive internal hæmorrhage. In face of such profound collapse and of the great probability, from the manner of the accident, that the damage was not limited to a single organ or part, but was multiple, laparotomy for discovery of the source and the arrest of hæmorrhage could not be entertained. The case was considered hopeless from the first and the following details of the post-mortem examination leave no doubt of this.

At the necropsy made by Dr. Voelcker abrasions were noticed on the lower limbs and on the lower part of the abdomen and loins. Both eighth ribs were fractured. The right pleural sac contained twelve ounces and the left eight ounces of blood. The peritoneal sac contained forty-six ounces of fluid blood. The spleen was lacerated on its inner and posterior aspect above the hilus. The right lobe of the liver was extensively lacerated both on its upper and on its lower surface. The right kidney also was lacerated and the loose tissue around it was distended with blood, which had crept upwards behind the diaphragm and gained entrance into the pleural cavity near the root of the lung. The left supra-renal capsule was distended with blood-clot.

LANCASHIRE COUNTY ASYLUM.

CASE OF GLIOMA OF THE CORPUS STRIATUM (LENTICULAR NUCLEUS) WITH MELANCHOLIC SYMPTOMS, ENDING IN UNILATERAL CONVULSIONS WITH HYPERPYREXIA.

(Under the care of Dr. COWAN, assistant medical officer.)

CASES of mental alienation arising from the development of cerebral tumours are not at all common. By mental alienation we mean such a degree of psychical disturbance as necessitates the incarceration of the unfortunate subject in an asylum. Authorities differ as to the relative frequency with which cerebral tumours are found in insane people and differ widely. Thus Clouston gives the proportions (quoting from various sources) of from two to twenty-eight cases out of 1000, which latter proportion has been his experience. Bucknill and Tuke, Bristowe and Griesinger, mention neoplasms as a cause but do not go into details as to frequency. Savage says: "It is rare to meet with insanity directly depending upon a growth within the skull. Among several thousand patients in Bethlem only one exostosis and syphilitic tumours have been met with post mortem."[1] As to the frequency of psychical disturbance arising in cases of cerebral tumour experiences also vary. Thus Andral and Durand Fardel assert that this occurs very seldom. Calmeil and others say that some form of mental alienation is present in from one-third to one-half of their cases. At this asylum, out of a very large number of patients treated during the last few years, it is comparatively rare to meet with cases of cerebral tumour and still rarer that it is certain the tumour is the cause of the mental disorder. Taking the statistics of the last five years, out of 14,969 persons under care during this period eight times only has a tumour been found—namely, in 4 males and 4 females. In three of these instances no definite symptoms were developed and the presence of the tumour was probably only accidental and not the exciting cause of the insanity. Even considering that in all the eight cases the tumours were the exciting causes the proportion is exceedingly small—i.e., 0·53 in 1000, or roughly 1 case in 2000. In earlier years the proportion is even less than this. In 7 out of the 8 cases the growth was a glioma or a sarcoma. With regard to the symptoms of this case several points seem of interest: 1. The rather long history—nearly two years and nine months. 2. The slight symptoms produced by the growth, probably due to its position, as it was only when pressure was exerted on the internal capsule that definite symptoms were produced. The more or less constant fixed headache, which was rarely acute, unaccompanied by nausea or vomiting and the slight attacks of giddiness. The hemiplegia, due evidently to the pressure of the slowly growing growth on the internal capsule and affecting both the motor and the sensory tracts. The absence of any other focal signs and of optic neuritis at any stage of the development of symptoms. 3. The occurrence of the unilateral fits at irregular intervals and of great severity on two occasions. The early occurrence of the status epilepticus with high temperatures. These convulsions seem to have been due to the pressure on the internal capsule and not to any pressure on the motor convolutions causing irritation and therefore discharges of motor impulses. The almost simultaneous affection of all the muscles involved also points to a uniform pressure on the posterior limb of the internal capsule. There was no evident reason why the fits should occur, or why they should be so severe on the two occasions—no hæmorrhage having apparently occurred into the tumour at these times. 4. The growth did not involve the internal capsule itself so far as could be ascertained by careful examination with the naked eye and with the microscope. The internal capsule simply being slightly pressed upon, as the gliomatous tissue did not extend beyond the middle of the inner part of the lenticular nucleus. 5. Speech was slow and drawling, but it was doubtful whether this was not a natural characteristic and not a result of the disease. It was thought at first that the case was probably one of early general paralysis of the insane, but more extended observation and especially the occurrence of the peculiar convulsions rendered this very unlikely. The diagnosis of a slow-growing new growth and probably one in the region of the right corpus striatum was then made, which proved to

[1] Insanity and Allied Neuroses.

be correct. From these few and somewhat unusual features, but more especially from the definite causation of melancholic symptoms by a new growth, a result by no means common, we have ventured to think that the case is an interesting one. In conclusion we have to thank Mr. Rooke Ley, the medical superintendent, for his kind permission to use the notes of this case.

A clerk aged twenty-six years was admitted to hospital on Nov. 20th, 1891. His family history presented nothing of importance and there was no history of insanity or of organic nervous disease in the family. He had never had a day's illness till two years ago and had not suffered from any kind of venereal disease. He first complained of headache a little over two years ago, which was intermittent at first but soon became constant and gradually increased in severity: a dull never-ceasing aching in the frontal and right temporal regions. No vomiting at any time. For the last few months he had noticed a gradual weakening of the left arm and leg. He says that he had two fits—of an epileptiform character, from the description—shortly before admission. He gave but a very imperfect account of himself during the last year. He had been in several situations, but had to give them up on account of the increasing pain in his head interfering so much with his powers of working steadily. He had been depressed and fearful for two months before admission, and to drown his sorrows had taken to drinking spirits. This rendered him more and more melancholic, dull and stupid, and he became delusional and developed suicidal tendencies. Measures were therefore taken for his removal to an asylum. The medical certificate stated: "He is dull and depressed and complains much of headache. He says 'that he is trying to discover perpetual motion. He wishes to put his head under an express train to cure both the headache and enable him to discover perpetual motion.'"

On admission the patient, a tall and muscular young man, had a frowning look, as if in pain. He was dull and miserable and complained much of a constant aching pain in the forehead and right temple, which at times became very acute. He never had any nausea or actual vomiting, but was giddy at times. The thoracic and abdominal viscera were normal; urine acid, sp. gr. 1024, contained no albumen or sugar; clear without deposit. Nervous system: There was slight left hemiplegia, involving the tongue, face, arm and leg, both motor and sensory paths being affected. The motor loss, although slight, was, however, very noticeable on comparing the two sides of the body; it affected equally the parts of the side involved. Sensory affection: Hemi-anæsthesia was also slight but well definable and of equal distribution, sensation over the left half of the body being distinctly dulled and delayed for every kind of stimulation. There was no apparent difference between the two sides with regard to the organs of special sense—sight, hearing or taste. Eyes: No affection of the ocular muscles, range of movement being good; no nystagmus. Pupils equal, of medium size and reacted well to light and accommodation. Ophthalmologically the fundi were normal. No sign of any papillitis, old or recent. Vision = $\frac{6}{6}$. Fields of full extent. Colour vision normal. Superficial reflexes badly marked on the left side, the plantar and abdominal being only just present. Deep reflexes: Both knee jerks brisk, the one on the left side being especially so; tendon jerks in the left arm fairly easily obtained; no clonl. Speech was rather drawling and hesitating, but this seemed natural to him; articulation good. Mentally he was dull and depressed. He feared some vague impending evil and thought that he was "done for" and meditated suicide. He begged pitifully for his life, as he fancied that he was being fattened up to be killed at Christmas. His memory was very deficient with regard to recent events and he could therefore give but a very imperfect account of himself.

On Nov. 28th it was noted that he had a severe fit, apparently of an epileptiform nature. It was uncertain how the fit began, but it consisted for the most part of clonic convulsions of the left side of the body. Consciousness was lost for a few minutes. No rise of temperature was noted. After the fit the patient complained much of giddiness and of severe headache. His condition remained unaltered for the next two months. He always complained bitterly of the constant wearying pain in the right side of the head, which, however, was not severe enough to disturb his rest much. His face always wore an expression of pain and he was constantly frowning and half-closing his eyes as if blinking at a strong light. He had, however, no photophobia. The loss of power and of sensation did not seem to further increase. Mentally he remained dull and miserable, although he brightened up somewhat at intervals; was rather vacant and listless, with slow mental reaction. He was ordered thirty grains of bromide of potassium three times a day and for a time he took iodide of potassium, but without benefit. In the evening of Feb. 3rd, 1892, he had a series of seventeen epileptiform fits in about two hours. There was no aura, the patient becoming convulsed and falling to the ground, consciousness being lost very soon. The convulsion began in each fit in precisely the same manner: (1) Strong conjugate deviation of eyes and head to the left, followed almost instantly by (2) tonic contractions of the left side of the face, the left arm and left leg. The tonic contractions lasted a few seconds and were followed by (3) clonic convulsions of the same parts. Each fit lasted about four minutes and was followed by an interval of about two minutes. The convulsion appeared to begin in all parts of the left side of the body almost at the same instant, there being no appreciable interval. The face was very livid and bloated and the surface of the body generally was dusky and bedewed with sweat. The temperature slowly rose until it gained a maximum of 103·8° towards the end of the fits. Consciousness was not regained during the continuance of the fits, the conjunctival and other reflexes remaining absent until some time after the occurrence of the last fit. The right side was not involved. The power of swallowing was not lost and chloral hydrate was given by the mouth, two doses of thirty-five grains, each at an interval of forty minutes. Soon after the second dose the severity of the fits diminished and the interval between them became longer until they finally ceased. The knee jerk and other tendon jerks on the left side were abolished for a short time. There was no increase of paralysis on the left side after consciousness was regained, although there had been for a short time after the fits had ceased.

Feb. 20th.—It was noted that he has had no return of fits but still suffers from headache, which is very persistent, and he is much as usual. Is still dull and despondent, but rather less so than he was. The physical signs are practically unaltered. The slight left hemiplegia remains, but has not increased. No other affection of muscles or of sensation has shown itself. No optic papillitis. Pupils are equal and react well. The reflexes are as described on admission. There has been no nausea or vomiting.

June 8th.—Had one slight fit to-day similar to the previous ones in character. Consciousness was lost for a few minutes.

July 14th.—Had this evening a series of twelve consecutive left-sided fits. The first began at 9.5 P.M. There was no apparent aura, the man falling suddenly to the ground without a cry and rapidly becoming unconscious. Each fit lasted from six to ten minutes from first to last and was followed by an interval of from one to three minutes before the onset of the next fit. The fits were very severe and were severally alike in their characteristics, each fit resembling in its features the preceding ones. The description of the fits which occurred last February applied to the present series in every respect except that each phase of the convulsion had a longer duration than at that time. Beginning as before with a strong conjugate deviation of the head and eyes to the left, followed by an almost simultaneous stiffening of the muscles of the left side of the face, body and left arm and leg in tonic contraction, and ending in very strong jerkings of these same parts. No appreciable difference in the times of onset of the muscular contractions (tonic or clonic) in the several parts affected could be detected. The temperature rapidly and steadily rose, and at 9.30 P.M. (twenty-five minutes after the onset of the fits) had reached 104°; pulse 120; respiration 40. At 10.15 the temperature was 107°, and 109° at 10.35 P.M.; pulse 180, feeble and running; respiration 64, shallow and whiffing. Ninety grains of chloral hydrate were given in two doses—the first dose at 9.30 P.M., the second at 10 P.M. At this time he was able to swallow, although apparently quite unconscious. Whisky was also given by the mouth and by the rectum. As the temperature increased the man's condition became very serious indeed. He was quite comatose, lying supine with flaccid limbs in the intervals between the fits; the face was of a dark-red colour, becoming more and more livid and bloated as fit succeeded fit, until his face and body generally assumed the same livid dusky tint. He sweated profusely, the water rising in the form of steam in clouds from the surface of the body. He breathed rapidly, shallowly and with a whiffing sound. The pulse was very small, soft and of a running character. The pupils were widely dilated and insensible, reflexes of every kind being quite abolished.

As the chloral seemed to have no effect and the man's condition was very serious the inhalation of chloroform was commenced at 10.15 P.M. It had to be cautiously administered because of the feeble state of the patient and then intermittently. For some time it also had no effect, and it was not until 10.35 that the fits began to lessen, and from that time until 11.5 only a few abortive ones occurred. At 11.20 the temperature had fallen to 107° and at 11.35 to 104·6°. The chloroform was then stopped, and shortly afterwards there seemed to be a slight return of consciousness and of reflex action, the man becoming restless and a slight conjunctival reflex (right) was obtained. During the next few hours the restlessness became more marked, the patient tossing his head from side to side, groaning and often raising his right hand to his head. There was a marked look of pain on his face, which still wore a livid aspect. Breathing became jerky and catching.

15th.—At 10 A.M. the temperature had fallen to 100°; pulse 120, still soft and small; respiration 56, whiffing and catching. There is complete left hemiplegia (face, arm and leg), both motor and sensory. Reflexes, superficial and deep, are absent. Pupils small, equal, and act badly. He has been restless during the night but with short sleeps; is conscious, but is dull and drowsy and can give no account of himself. Still complains of right-sided headache; has had no vomiting. Can swallow but slowly and chokily. Passes his evacuations into the bed. Has had no return of fits. 5 P.M.: The patient is becoming weaker, face is paler and is looking pinched. Temperature 99·6°; pulse 132, very feeble and running. He is breathing very quickly and shallowly, 64 to the minute, and is drowsy and sleeps at interval, but he is often distressed by the pain in his head, which at times is very severe, causing him to groan loudly and to toss from side to side; he has not vomited; can swallow, but less readily. There is a slight return of power in the left thigh (extensors), but otherwise the paralysis of the left side is complete; no squint or apparent weakening of the eye muscles. He was ordered stimulants and liquid nourishment by mouth and rectum. No twitching of muscles or return of the convulsions.

The patient did not improve but steadily became weaker, the heart evidently failing. The pulse became imperceptible at the wrist, the extremities were cold and the face pale and pinched. Towards the last he lapsed into stupor and died quietly at 11.45 P.M.

Post-mortem examination, thirty-nine hours after death.—The body was well nourished and muscular. Rigor mortis was present in legs, passing off in arms and absent in neck. There were marks of old ulcers on the right calf over the lower half of the fibula; the post-mortem staining was well marked. The calvaria was fairly hard and of medium thickness, symmetrical, and showed no sign of disease or of injury. The dura mater and pia arachnoid were normal; twenty-nine drachms of translucent fluid collected; sinuses full of dark liquid blood. The brain weighed 48½ oz. There was a moderate amount of venous congestion on the surface, but this did not extend to the smallest radicles. The cortex generally appeared normal, was firm in consistence, and the convolutions were well marked except in the following parts. The right temporo-sphenoidal lobe at its upper and anterior part was small and soft, and the adjacent parts of the ascending and third frontal convolutions were also rather small and flattened. On separating these convolutions and opening up the Sylvian fissure a yellow translucent mass was seen occupying the position of the island of Reil on this (the right) side. This growth was evidently the cause of the wasting and flattening of the above-named convolutions. On further dissection the full extent of the growth was made apparent. It was of an oval shape, twenty-three lines in its antero-posterior diameter and eighteen lines in its lateral diameter. Occupying the place of the convolutions of the island of Reil it had involved the claustrum and the outer or third part of the lenticular nucleus in their entirety and nearly half of the second part of the said nucleus. The internal capsule was flattened and somewhat displaced inwards, but the growth had not involved it nor was there any apparent difference in colour and texture compared with the normal condition. The brain tissue round the tumour looked pale and somewhat yellowish The tumour was of rather soft consistence, especially in the centre, where the softness amounted almost to diffluence. It was of a yellowish-buff colour and of gelatinous appearance. No hæmorrhages old or recent had occurred into the tumour. After hardening sections of the tumour showed it to be a soft glioma of typical appearance; fatty degeneration was beginning in the middle; no hæmatoidin crystals were seen. Other sections were made both in the fresh state and after hardening to determine the extent of the growth. The internal capsule showed no evidence of growth and it was not until the middle of the second part of the lenticular nucleus was reached that glioma tissue was observed. No evidence of new growth was found in the frontal or temporo-sphenoidal convolutions. The lateral ventricles were normal. No other lesion of the brain or of the spinal cord was observed. All the organs were soft and dark in colour, probably from the pyrexia. With the exception of small hæmorrhages into the lower lobes of both lungs there was no evidence of disease in any of the thoracic or abdominal organs.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lingual Ulcer.—Infantile Adrenal Disease.—Papilloma of Penis.—Hæmorrhage into Pericardium.—Renal Sarcoma spreading down Ureter.—Psorospermosis and Squamous Epithelioma.—Ulceration of Arm following Vaccination in Hereditary Syphilis.

AN ordinary meeting of this Society was held on Dec. 20th, the President, Sir George Humphry, in the chair.

Mr. WINGRAVE showed a patient aged fifty with a sharply defined ulcer on the tip of his tongue of about the size of a shilling and heart-shaped, with the apex extending towards the frænum. The base consisted of florid raspberry-like granulations, projecting through a creamy discharge, whilst the edge was of a vivid red and rather elevated. The surrounding tissue was but slightly indurated. Beyond a little soreness during eating there was no pain. The submaxillary glands were scarcely felt. It commenced ten months ago as a small red pimple, which he attributed to smoking clay pipes. There was no specific history. His father died of "blood-spitting," but beyond this there were no family indications of tubercle. He had never been seriously ill excepting two years ago, when he spat up blood for several weeks on and off. Had smoked and indulged in alcohol freely. Had lately lost flesh and been troubled with night sweats and bronchitis, with profuse expectoration. During the last few weeks diarrhœa had reduced his strength considerably. Beyond some bronchial râles no definite physical signs were to be made out. His dentition was somewhat remarkable, the canines being represented by very prominent "tusks," whilst his other teeth were in various states of decay. The canines were filed down and all rough edges were removed so that for at least four months dental irritation might be excluded. Superficial scrapings were examined for tubercle bacilli with negative results. The case had a strong resemblance to two examples of lingual ulcer reported by Mr. Morton on Jan. 5th last, but in these there was abundant evidence of tuberculous changes elsewhere. The general features and the sites of the ulcers were similar, whilst the age in one was fifty-five and the other thirty-four.

Mr. WAINEWRIGHT showed the Adrenals removed from an infant that was admitted to hospital with purulent ophthalmia. At the post-mortem examination these organs were found extensively diseased. They were half an inch long and five-eighths of an inch across, being tough and slightly nodulated. The outer layer was white and apparently normal. Inside this there was a band of yellow pigment, and the central portion was translucent and gave a sensation of grittiness to the knife. Under the microscope the internal portion was proved to consist of a fibrous network containing many small cells in its meshes and also much caseous and calcareous matter. There was nothing resembling a tubercular area or giant cells.—Dr. WHEATON considered that the lesions were the result of an antecedent hæmorrhage.

Mr. W. ARBUTHNOT LANE read the report of a case of very extensive rapidly destructive Papilloma of the Penis which had been under his care. It occurred in a man aged thirty-nine, who had never before suffered from any venereal complaint. Three weeks after connexion with a prostitute he found the prepuce swollen, and he was seen by a medical man, who stated that he found a ragged chancre on the under surface of the prepuce. This became phagedænic, and was treated by nitric acid &c. The organ, in spite of

this treatment, continued to enlarge, and he was admitted into Guy's Hospital about four months after the onset of his symptoms. On admission the penis was represented by a large soft globular mass as big as an orange and consisting of a soft finely branching papillomatous material, which bled readily both spontaneously and on being manipulated. This extended to the root of the penis, where it ceased abruptly, and forwards around the margin of the glans. Warty material was observed in the orifice of the meatus, but this was not continuous with the papillomatous growth around the corona. No trace of any ulceration of a phagedænic character or otherwise could be seen. On attempting to shave off the warty mass it was seen to penetrate the corpora cavernosa to some extent and to have destroyed the floor of the penile urethra, along which the growth extended forwards to the anterior orifice and backwards nearly to the limit of the outside growth. The penis was therefore amputated and its subsequent examination appeared to show that the papillomatous growth started in the urethra at a distance of about three-quarters of an inch from the orifice, that it perforated the spongiosum and skin of the foreskin, when it simulated a chancre, which soon developed an apparent phagedænic appearance, and that the soft papillomatous growth rapidly extended backwards and forwards over the penis, destroying the skin and the surface of the cavernosa. It was papillomatous in structure, presenting no evidence of epithelial ingrowth. The patient recovered without any recurrence and was now quite well.—Mr. SHATTOCK referred to a specimen in St. Thomas's Hospital, which was much like the one shown and which, while it resembled in structure a papilloma, yet infiltrated the neighbouring tissues.—Dr. WHEATON thought that the formation was much like those structures which grow in the bladder resembling papilloma, but being really of carcinomatous nature. The specimen was referred to the Morbid Growths Committee.

Dr. ROLLESTON showed the Heart and Aorta of a man who fell dead off his cab and was brought into St. George's Hospital. There was a rupture of the internal and middle coats of the aorta a quarter of an inch above the aortic valves. The rupture ran upwards for an inch and a half and was on the right side of the aorta. The external coat and visceral layer of the pericardium were intact, except for a small perforation about the size of a pin's head. It was bulged out and very thin. The aorta was generally atheromatous and the first part of the arch was slightly dilated. The veins of the neck were distended with blood. The pericardium was distended with twenty-four ounces of recent jelly-like blood clot in addition to some blood-stained fluid; there was no pericarditis. There was a little recent clot adherent to the outside of the bulging formed by the external coat of the artery at the site of rupture. It appeared probable from the large amount found in the pericardium that the blood had filtered in gradually.

Dr. PENROSE showed the Urinary Organs from a case that had been in St. George's Hospital under the care of Mr. Bennett in the early part of 1888. The whole of the left kidney had been replaced by a large round-celled sarcoma, which weighed six pounds two ounces. The right was much enlarged and dilated. The bladder was also enlarged, and contained two masses of sarcoma cells, one of which was attached to and appeared to be growing from the neck of the bladder, but the other was lying loose within the cavity of the bladder. Both these masses consisted almost entirely of large sarcoma cells, identical with those of which the kidney growth was composed. From the clinical history of the case it was gathered that the patient had been losing flesh for about two years before death; that early in December, 1887, the urine became difficult to pass, as the stream would stop suddenly, and only after a considerable interval of time would dribble away. On Jan. 23rd, 1888, after having strained hard to pass urine, during which the patient was in great agony, he found a long worm-like body issuing from the urethral meatus, and about a quarter of an hour later this mass was shot out of the urethra. It was examined by Dr. Delépine, who reported as follows: "This cast is partly composed of coagulated blood and partly of tumour cells. The tumour cells form masses distributed all through the cast; from their nature the tumour is evidently much degenerated, and it is difficult to say whether the stroma between them is not partly due to coagulated blood. It is difficult to say whether the tumour is carcinomatous or sarcomatous; it is probably sarcomatous." Whilst the patient was in hospital the urine was generally clear, acid, of low specific gravity, and with a trace of albumen; occasionally, however, it contained some small round masses which were found by Dr. Delépine to consist of red blood corpuscles, mucus and large oval and round cells in an advanced stage of fatty degeneration. After consultation it was determined not to operate. The patient died on April 11th, 1888. At the post-mortem examination, besides the condition of the urinary organs mentioned above, secondary growths were found in the retro-peritoneal glands and in the right lung; otherwise the organs of the body appeared to be healthy. Unfortunately the brain and eyes were not examined. Dr. Penrose expressed his indebtedness to Mr. Bennett, Dr. Delépine and Mr. Bull for allowing him to bring forward the case and use their notes.—Mr. SHATTOCK referred to a specimen in St. Thomas's Hospital in which sarcoma of the kidney was associated with a cyst of the ureter.—Mr. SHEILD questioned whether the lower growth was not one which had become implanted from the upper.—Dr. CHARLEWOOD TURNER referred to a specimen which he showed some years ago. It was an instance of cirrhosis of the liver and the blood in the larger branches of the portal vein was found to contain liver cells. This was believed to be due to rupture within the organ, the cells becoming detached and washed into the blood current.—Mr. BIDWELL, after examining a kidney recently removed for sarcoma, found the ureter much dilated and an easily detachable fungating growth extending down it.—Dr. ROLLESTON regarded implantation as improbable and believed that the growth was an extension down the ureter which had contracted adhesions at a lower point.—Mr. SHEILD maintained that the known fact of secondary growths arising from portions of the original neoplasm carried by the veins was in favour of the implantation view.—Dr. PENROSE replied that he regarded the lower growth as an implantation one and similar to that at the neck of the bladder. There was a mass of sarcomatous cells lying free in the bladder which was covered with phosphatic deposit.

Mr. J. JACKSON CLARKE described a case of Epithelioma of the Septum of the Nose. The growth was removed from a gentleman aged eighty-two by Dr. Scanes Spicer, and was a squamous epithelioma abounding with what must be regarded as psorosperms. Before making the report the sections were compared with those of a case of psorospermosis of the kidney, ureter and bladder previously described. At the time he brought the specimens from that case before the Society he had been unable to prove conclusively that the lesions were of psorospermial origin. This was on account of the absence of coccidia with special capsules resisting staining fluids like those of the rabbit's liver and of the resemblance of the large cells in the cysts of the kidney and ureter to the so-called "colloid cells" of squamous epithelioma. But he had since fully convinced himself that that case was one of psorospermosis. A further examination of the lesions showed those of the ureter and bladder to be of the type of cystic adenomata. On comparing the psorosperms of the renal and ureteral cysts with certain cells of the squamous epithelioma he found an exact correspondence of structure and concluded that the epithelioma was also of psorospermial origin. The chief points of resemblance were enumerated as follows:—1. In neither case were coccidia with special stain-resisting capsules discovered, but every other stage of the rabbit's coccidia was represented in both cases. 2. In sections of the tissues hardened in Müller's fluid large cells, chiefly oval in shape, staining deeply with carmine and but slightly with acid hæmatoxylin, were present. In the epithelioma the form of some of the cells was greatly modified by pressure of the surrounding cells. In epithelioma these cells, which had hitherto been regarded as degenerated epithelial cells, were unmistakably psorosperms. The idea of degeneration was in both cases absolutely negatived by the beautiful nuclear figures presented by some of the peculiar cells and by clear evidences of the biological processes described below. 3. The large cells at a certain period of their existence showed an extension of the nuclear network which eventually filled the whole cell and this then divided into a great number of amœbæ which were set free by rupture of the capsule of the mother cell, if it had not disappeared already. Conjugation previously to the amœba formation was observed. 4. In both cases there were many large psorosperms lying within epithelial cells, the parts of which adjoining the parasites were modified into capsules. In sections stained with picro-carmine and mounted in glycerine these capsules were seen to possess a beautiful radial striation, which sometimes gave a semblance of a radiated structure to the protoplasm of the psorosperm, a semblance which on close examination disappeared. Mr. Clarke had not seen any clear account of the amœboid stage of

psorosperms in cancer. Most writers had failed to distinguish the amœbæ from leucocytes. He stated that this stage of the parasite's cyclic existence afforded the key to the malignant character of the disease. He had detected clear evidence of the following process:—1. A single psorosperm or one resulting from the conjugation of two or more became changed by the formation of a usually delicate but sometimes coarse reticulum which extended outwards from the nucleus or nuclei till it filled the whole cell. 2. The reticular plasmodium usually surrounded by the capsule, consisting of the dead and distended host-cell broke up into rounded segments which kept the reticular structure and stained slightly purple with acid hæmatoxylin. 3. Within some of these daughter psorosperms fine filaments of chromatin appeared, whilst the reticular structure became less obvious in the rest of the cell. The amœboid cells were set free by rupture of the capsule (when present). They give evidences of multiplying by division and were easily distinguished from leucocytes in specimens treated with acid hæmatoxylin. 4. The amœboid parasites made their way in vast numbers into the connective-tissue spaces beyond the epithelial part of the growth. In their passage they caused separation of columns of epithelial cells and thus brought about a multiplication of the points of epithelial ingrowth and detachment of small groups of epithelial cells. A considerable amount of inflammation was caused by the invasion of the vascular tissues by the amœbæ, with the same result as was seen in inflammatory papillomata—e.g., mucous tubercles—namely, an extension of epithelial growth and a formation of new bloodvessels &c. 5. Most of the amœbæ disappeared and the inflammation subsided. A small proportion of the parasites entered epithelial cells, where, even in the non-nucleated amœboid stage, they could with care be detected. In the course of growth they remained near the central parts of the epithelial columns, as the now familiar intra-cellular psorosperms which in squamous epithelioma were most abundant in and about the cell nests. When they arrived at a certain stage the cycle was renewed and a fresh extension of growth, sometimes with separation of lymphatic or venous epithelial emboli, and resulting metastasis. In conclusion, he insisted that the cyclic life of the parasites and their reaction on the tissues of the host accounted for all the phenomena of the disease. The contents of the cysts in the case of psorospermosis of the urinary tract resembled to the naked eye those of the cysts of colloid cancer. A consideration of the case afforded suggestions for the investigation of mammary adenomata, adenoma of the cervix uteri &c. in their relation to cancer. The amœboid psorosperms were identical in structure with some of the plasmodia met with in ague. The cyclic course of this disease was suggestive of a cycle in the life of the parasites. There might be psorosperms in the enlarged spleen and in lymphadenoma from which it was but a step to leucocythæmia and sarcoma. In the squamous epithelioma of the septum of the nose and in one of the lip, two of the tongue, in a cancer of the kidney and several of the breast he had found the structural evidence so full and complete both in the primary and in the secondary growths, that in these cases he deliberately attributed the disease to the parasites. In a cystic scirrhus removed by Mr. Edmund Owen from a woman aged twenty-eight the cream-like contents of the cysts consisted wholly of amœboid psorosperms. The paths of the infection remained to be explored; apart from this the mystery of the disease was solved.—Mr. SHATTOCK said that, with Mr. Ballance, he had been studying this subject for a long time. Until the organism was successfully cultivated and Koch's four postulates were fulfilled it was not right to affirm that these organisms were the cause of cancer, though that view might seem exceedingly probable. These appearances had mostly been found in squamous epithelioma, but there were many objections to examining surface growths, as the vagina, for instance, normally contained protozoa, and growths from the uterus might be influenced by their presence. Though Mr. Clarke might have demonstrated one cycle of the growth of the parasite, it was quite possible that there was another cycle outside the human organism—in rabbits, for instance, appearances were often found different to those described. He himself inclined to Metchnikoff's view that the parasite did not grow within the body or within the tumour. They could not infect lower animals with cancer from the human being, but they were endeavouring now to discover how to cultivate the parasite outside the body and then infect the lower animals with it. Though there had been a few cases of successful inoculation, these were as rare as the occurrence of cysticercus in man.—Dr. GALLOWAY found that Mr. Clarke's description did not agree with that of other observers and held that it required much courage to say it was the psorosperm at all. He agreed that squamous epithelioma was a most misleading growth to study and said that the material to be examined should be removed with much care and immediately placed in hardening fluid.—Mr. CLARKE replied that he had not confined his study to squamous growths and he maintained that there was evidence in the sections he had shown of the biological processes he had described. The cycle he had described as taking place within the body he believed to be the most important if not the only one so far as the patient was concerned. He had adopted every precaution in preserving the tissues before examination.

Dr. WHEATON showed a specimen of Ulceration of the Arm following Vaccination in a case of Hereditary Syphilis. The child was born in an infirmary, and was vaccinated when seven days old. It was well nourished at the time of birth, but the mother stated that it had "snuffles" from the first. No result followed vaccination until the seventh day, when large white blisters appeared at the points of inoculation. Seven days later the blisters burst, leaving three deep ulcers in the skin. Simultaneously with the bursting of the blisters similar ones appeared on the abdomen. The ulcers on the arm continued to enlarge and two of them coalesced, so that there were two circular ulcers on the arm, each larger than half a crown, when the child was admitted into hospital, six weeks after vaccination. On admission there was also a general pemphigoid eruption with desquamation of the cuticle of the hands and feet, fissures of the mouth and dark-brown stains on various parts of the body. Mercury was at once given and the ulceration of the arm improved rapidly; when the child died four days later one ulcer had nearly healed and the other had become covered with a thick scab. Dr. Wheaton said that the case was clearly one of phagedænic ulceration, following vaccination in a child suffering from hereditary disease, and in which the vaccination had hurried on the development of the cutaneous eruptions of hereditary syphilis. In cases where primary inoculation had occurred by vaccination the secondary eruption never appeared in less than nine weeks afterwards, whereas in the present case it had developed in fourteen days. The presence of hereditary syphilis was a frequent cause of phagedænic ulceration in infants. Any lesion of the skin, such as vaccination, impetigo or the separation of the umbilical cord, might be followed by this ulceration; and he had seen it occur on the soft palate, accompanying tonsillitis in a syphilitic infant. It was impossible to avoid vaccinating infants who might appear to be quite healthy but were the subjects of hereditary syphilis, and the earlier the vaccination was performed the greater the risk, as in the case described.—Mr. SHIRLEY MURPHY had found that similar effects followed the use of calf lymph in children suffering from hereditary syphilis, and that the syphilitic eruption generally appeared on the tenth day after vaccination, which coincided with the time of the appearance of the eruption in inoculated small-pox and also with that of the appearance of erythematous rashes after vaccination.

The following card specimen was shown: Ivory Exostosis of the Skull.

Reviews and Notices of Books.

Dissections Illustrated: a Graphic Handbook for Students of Human Anatomy. By C. GORDON BRODIE, F.R.C.S., Senior Demonstrator of Anatomy, Middlesex Hospital Medical School, Assistant Surgeon to North-West London Hospital. Part I., The Upper Limb. London and New York: Whittaker & Co. 1892.

THE first part of this handbook, which will be completed in four parts, contains seventeen coloured plates, two-thirds of the actual size drawn and lithographed by Mr. Percy Highley. The plates are exceedingly well drawn and placed on stone, and when we add that in many respects they are nearly as good as the well-known masterpieces of Professor Ellis and Mr. Ford we are giving them high praise. By reducing the size and the expense it is hoped that students will use such plates as models for their own dissections and we may say that if so

used much benefit will be derived from the study of them. We venture to think that the diminution from the life-size will prevent the plates from being too greatly used by the student to "recall the work already done when revising his anatomy previous to an examination." This revision can only be thoroughly done by direct study from the subject itself. The plates seem to be quite correct and to have been taken from actual dissections, and some good illustrative diagrams are added. The explanatory letterpress is clear and concise, but mainly morphological and not such as can be understood by the junior student. But apart from this we can strongly recommend the work as a legitimate aid in the dissecting-room. The cost of this part is 8*s.* 6*d.*, which is certainly remarkably small when the accuracy and finish of the illustrations are taken into consideration.

Alcoholism and its Treatment. By J. E. USHER, M.D., formerly Surgeon Superintendent and Medical Officer of Health to the Queensland Government. London: Baillière, Tindall & Cox. 1892.

THIS little work of 148 pages contains some interesting studies in alcoholism from a cosmopolitan standpoint and differs very much from the scholastic essays on this subject with which we in this country are so familiar. The conclusions of the author as to the causation of chronic alcoholism are thus expressed:—"Heredity in 60 per cent. of cases; injuries, railway shock and wasting diseases, 20 per cent.; nervous exhaustion, 10 per cent.; whilst 5 per cent. of the remainder can be laid to insanitary conditions and poor food." We cannot but think that the former cause will be found to coexist with many of the latter if a severe investigation were made. The chapters on insanity and alcoholism, alcoholic trance and crime and cerebral automatism or trance, are very interesting. The cases would have appealed more strongly to English readers had they occurred in this country. Extreme forms of religious devotion, extreme examples of neurotic diseases and extreme cases of alcoholic inebriety and narcotic poisoning, and we may add a use of powerful physiological drugs for the cure of the latter conditions, seem to be much more common in America than in this country. The laws of England and America differ very much as to the mode in which sufferers from alcoholism should be dealt with, and a concise review of the drunkard's legal relations in America and in England, both in civil and in criminal cases, is one of the best features of the book. The only efficient treatment of confirmed alcoholism consists in isolation, proper supervision and the prevention of the obtaining of alcoholic stimulants or narcotics under any pretext; for the adjuvants used by many and various well-known authorities on alcoholism we must refer the reader to the later chapters of the work itself.

THE CORBETT HOSPITAL, STOURBRIDGE.—The gentleman (Mr. John Corbett of Impney) to whose liberality the existence of this institution is owing, as well as many other gifts in the way of enhancing its value to the poor of the neighbourhood, has forwarded a further cheque of £500 to the committee in order to supplement any deficiency which may be found to exist in the amount required for furnishing the institution.

METROPOLITAN ASYLUMS BOARD.—The number of patients remaining in the several hospitals of the Board at midnight on Dec. 27th was as follows:—Eastern Hospital, 305 scarlet fever, 59 diphtheria and 33 enteric fever; North-Eastern Hospital, 407 scarlet fever; North-Western Hospital, 316 scarlet fever, 93 diphtheria and 13 enteric fever; Western Hospital, 285 scarlet fever, 32 diphtheria and 13 enteric fever; South-Western Hospital, 271 scarlet fever, 54 diphtheria and 19 enteric fever; South-Eastern Hospital, 327 scarlet fever, 17 diphtheria and 15 enteric fever; Northern Hospital, 755 scarlet fever and 6 diphtheria; Gore Farm Hospital, 620 scarlet fever. On the hospital ship *Atlas* on the same date there were 39 cases of small-pox and at the South-Eastern Hospital there was one case.

New Inventions.

TONGUE FORCEPS.

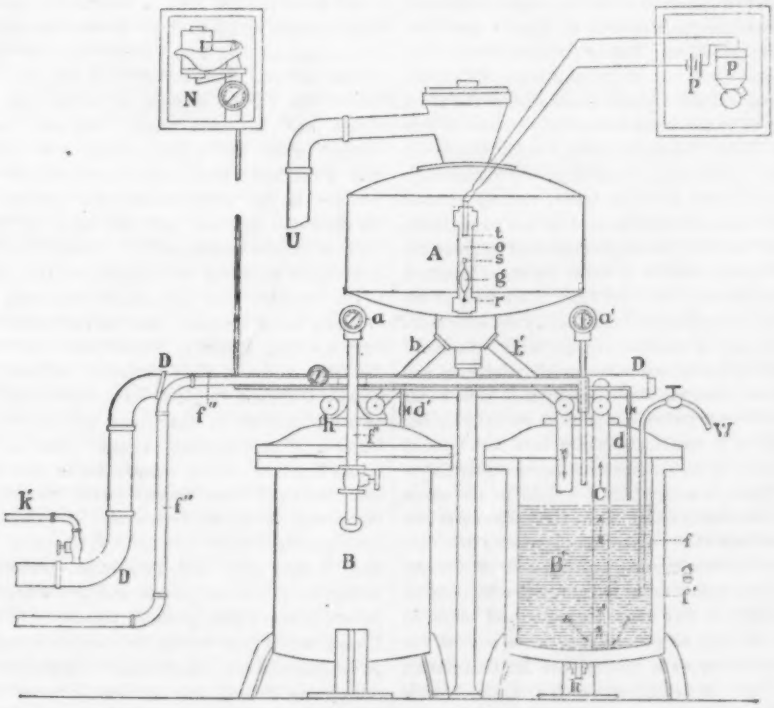
HAVING frequently felt the want of a reliable and efficient tongue forceps when performing operations on the mouth and naso-pharynx, and having invariably met with disappointment when using any of the numerous instruments supplied for this purpose, I have designed an instrument which I can with confidence recommend to my professional brethren. It has been manufactured for me by Messrs. Arnold and Sons with their usual care and has thoroughly answered my requirements. The blades are somewhat quadrilateral with rounded handles, fenestrated and made of slightly flexible steel, with the surfaces for contact roughened; the lower blade has a U-shaped notch for receiving the frænum linguæ. The blades are covered with rubber to prevent injury to the mucous surface. The handles are long, provided with a catch and bent at an angle, so that they can be held without interfering with the view of the operator. These forceps will retain an efficient hold without inflicting injury on the organ, and will be found as valuable for drawing forward the tongue during anæsthesia as for operative purposes.

C. YELVERTON PEARSON, F.R.C.S. Eng.,
Assistant Surgeon to the North Charitable Infirmary and City of Cork Hospital &c.

APPARATUS FOR THE DISINFECTION OF FLUIDS.

MANY readers of THE LANCET have lately been interested in reading of Professor von Pettenkofer's dietetic feat in eating Koch's cholera microbes. It must, however, be admitted by everyone that the whole incident proved nothing, except that Koch's bacilli disagreed with von Pettenkofer. It is not uninteresting to note that the number of THE LANCET which contained this record contained also a careful account by Dr. Clemow of Cronstadt of the methods adopted in Russia for the disinfection of cholera evacuations. Amongst other methods he mentions that of boiling, which process is carried out at the Alexander (Barrack) Hospital at St. Petersburg. The apparatus is somewhat complicated and a description of it may be of interest. The receptacle A, holding about eighteen gallons, is joined by means of tubes, *b* and *b'*, with the two boilers B and B', having double walls *f* and *f'*, capable of supporting a pressure up to seven atmospheres. The pipes *b* and *b'* open within the boilers in such a manner that the end of each stands out a little from under the lid of the boiler. Into each of the boilers is led another tube, C, going almost to the bottom, which unites with the tube D for the purpose of passing the contents of the boilers into the drain. Each boiler is provided with a manometer *a* and *a'*, showing the pressure within the boilers. The steam from the general steam boiler is led by the tube *f'* into the interval, *g*, between the walls of the boilers, and having done its work has exit through the tube *k* into condensing vessels. At the stopcocks of the tubes *b* and *b'* and also of the tube C is an adjustment, A, allowing

the stopcocks of the entrance to open when the stopcock on the exit tube is closed and *vice versâ*. The tube W serves for receiving samples of the contents of the boilers for examination. For control of the work from the boilers B and B′ are the tubes *d* and *d′* go to the manometer N, which has a clock-work mechanism and a recording apparatus which marks the pressure in the boilers and how long the pressure has lasted. This control apparatus is situated in the private room of the doctor who has charge of the disinfecting processes. For control of the fluids entering the receptacle A and to avoid its boilers into the drainage-pipe by the tube D, cold water being previously admitted into this last through the tube *k′*, for mixing with and cooling the disinfected fluid. The whole process, counting from the moment of filling the boilers and entrance of steam till the exit of fluid into the drain, takes about an hour, during which the pressure as shown by the manometers attains that of three atmospheres, with a pressure of four atmospheres in the great general steam-boiler. This time is shorter if the boilers work constantly—i.e., their walls being warmed by the previous boiling are not cooled by the new portion of fluid entering them. This apparatus was



being overfilled in a ganging-tube, *e*, is placed a glass float, *g*, with a reservoir of mercury at the lower end, and a little cup, *s*, at the top, which is also filled with mercury. Through the upper opening of the ganging-tube are admitted into its canal two platinum wires, *t*, of equal length, the lower ends of which can be fixed at any given height, corresponding to the level of a known quantity of gallons of fluid in the receptacle A. The upper ends of these wires are united with elements (Laclanché), P, and with a bell, P, placed in the building of the general boilers of the hospital, and therefore near to the firemen and machinists. Fluids from the post-mortem room flow through tube U into A, the level of the post-mortem room being higher than that of the receptacle A. The whole process of disinfection is carried out thus:—From the receptacle A the fluid flows through the tubes *b* and *b′* into the boilers B and B′. Into the now empty receptacle fresh quantities of fluid are introduced while that is being disinfected in both boilers, so that the one process does not prevent the other. When the boilers are filled steam is admitted through the tube *f′* into the interval *g* between the walls of the boilers. The degree to which the fluid is heated is shown by the manometers acting on the recording apparatus N. When the process is finished the stopcocks of the tubes C open and let out the contents of the

invented by MM. Vassilief and Krel, and the diagram is taken from Dr. Krupin's book. I have to thank this gentleman for his permission to reproduce it and Dr. Clemow for kindly translating the accompanying description.

RICHARD SISLEY.

THE ALBERT PALACE.—The promise of £15,000 made to Mr. John Burns, M.P., by Mr. Passmore Edwards seems likely to result in the acquisition by the public of this important place of instruction and recreation as soon as the necessary preliminaries are carried out with the First Commissioner of Works.

LONDON AND COUNTIES PROTECTION SOCIETY.—A meeting of the Council of the East Anglian Division of this Society was held at Hatter-street, Bury St. Edmunds, on Wednesday, Dec. 21st., Mr. Fegen of Brandon presiding. After some general business had been transacted, it was decided to hold a general meeting of the members and others interested in medical protection at Bury, at an early period in 1893, John Kilner, Esq., F.R.C.S., senior surgeon to the West Suffolk Hospital, being invited to preside. Mr. Mead (Newmarket), the organising secretary, reported that at least thirty divisions had been already formed and that at a recent meeting of the General Council in London 142 new members were elected.

THE LANCET.

LONDON: SATURDAY, DECEMBER 31, 1892.

THE ANNUS MEDICUS 1892.

THE year 1892, viewed from a medical standpoint, has been an eventful rather than a happy one. It was not many days old before a recrudescence of influenza manifested itself in this and other countries, and that in a more fatal form than on previous occasions. One of its earliest and most distinguished victims was our illustrious ally the KHEDIVE; pneumonia ensued and put a speedy termination to the life of his Royal Highness, under circumstances fully detailed in THE LANCET of Jan. 23rd. The death of the Duke of CLARENCE from pneumonia on Jan. 14th, on the very eve of his marriage to the Princess MAY, was an event which sensibly affected the whole nation, and even other nations, as was natural from considerations of the lofty rank and anticipated future of the illustrious pair and the affection in which the Royal Family is held at home and abroad. We shall have to tell later of the wide mischief wrought throughout this country and other lands by this epidemic and of another one still more "feared of man," but which yet does not move more mysteriously and uncontrollably, and from which we happily have been so far spared in spite of occasional cases landed on our open shores.

The public spirits, to speak colloquially, have been lowered throughout the year by the prevalence of depressed conditions of trade and by a movement which it should be the object of legislators to counteract—that of the rural population into towns, depriving them of the advantages of country life while complicating and injuring in many ways the case of dwellers in towns. It is not seemly for us to indulge in reflections on political affairs save as they affect the health and wellbeing of nations, but we may be permitted to make note of the fact as one unprecedented in history that Mr. GLADSTONE at the ripe age of eighty-three has again become Premier and that he has taken into his Ministry a member of our own profession—Sir WALTER FOSTER. Whatever the politics of medical men they will not fail to see in this act of Mr. GLADSTONE a certain recognition of a profession, for which our statesmen have done less and to which they have shown less respect than the statesmen of any other country of Europe. It is undeniable that the profession has great lessons to teach States, and that our own country in particular has been served as well as, if not better than, any other by its medical men either in practice or in medical relation to the Government. But so far they have been lightly regarded as compared with other professions, and one great branch of the Legislature, the House of Lords, is conspicuous by the determined exclusion from it of medical men, no matter to what eminence they may have attained. In respect of France, on the contrary, columns of *The Times* are filled with a report of the proceedings in honour of M. PASTEUR on his attaining to his seventieth birthday, graced by the presence of the PRESIDENT of the Republic and led by M. DUPUY, Minister of Public Instruction. We shall at once proceed, under definite heads, to indicate the chief facts in the medical history of the year 1892.

Anatomy and Physiology.

The large and constantly increasing number of journals devoted to the subjects of anatomy and physiology, together with the length, variety and excellence of the papers they contain, render it year by year a more difficult task to supply a concise summary of the work that has been accomplished in these departments of medicine and still less to give any critical estimate of its relative value. Long articles are not always the best, even when names of high repute are appended to them, whilst an unknown and rising man may in a few lines shadow forth a substantial addition to our common stock of knowledge. Perhaps the most interesting of the memoirs that have recently seen the light are those on the nervous system. No one who first attempts to unravel the various plexuses of nerves that exist in the thorax and abdomen would conceive that by any human means the origin, course and distribution of their constituent fibres could be traced, so complex and intricate is the interlacement they present. To effect the dissection by hand with the naked eye is impossible, but even the microscope with its various accessory means of staining and mounting seems at first sight to afford little aid to the inquirer. But care, close observation and patience overcome many obstacles and the researches of GASKELL, SHERRINGTON, RUSSELL, EDGEWORTH and LUCIANI show that the scheme of the arrangement of these complex networks is beginning to yield to the attack and that it may be hereafter possible to understand the composition and the function of each separate strand. This result proceeds mainly from the original observation of GASKELL, that the splanchnics and other visceral nerves, instead of consisting exclusively, or almost exclusively, of sympathetic fibres, really contain three or four quite distinct sets of fibres, distinct in their origin and distribution, probably possessing distinct attributes and powers, and presenting sufficient difference in their aspect to enable them to be followed. From EDGEWORTH'S observations, for example, it appears that the pelvic viscera have a double supply of large medullated fibres, one coming directly from the sacral nerves, the other indirectly through the hypogastric from the lower dorsal and upper lumbar nerves, and by making a series of continuous sections upwards from the ramus communicans it was found possible to trace up these large fibres into the posterior root of the nerve, affording strong evidence of the sensory function of these large medullated fibres, a view that is fully sustained by the results of degeneration on cutting the posterior root proximally and distally to the ganglion and from the results of its stimulation, and still further sustained by examination of the fibres proceeding to the Pacinian corpuscles in the mesentery of cats. From such converging and mutually corroborative evidence it is clear that the large medullated fibres found in the sympathetic, and probably also those in the sacral splanchnics, are sensory in function. So, again, the observations of RUSSELL and SHERRINGTON have demonstrated that great uniformity underlies the apparent complexity of the brachial and lumbo-sacral plexuses, that the several roots have a very definite and constant distribution, that the fibres representing or capable of exciting certain movements always preserve the same position in a given root; so that, for example, extension of the wrist is effected by a fasciculus of fibres in the upper part, whilst flexion is repre-

sented by a bundle in the lower part of the same root, and that a great number of muscles obtain their nerve supply from several nerve roots; so that whilst their synergic action in the various coördinated movements of the body is provided for, injury or disease of a particular root is followed by only a partial and temporary loss of function. SHERRINGTON has been able to give a long and interesting list of the muscles that can be called into action by the stimulation of each special nerve root. It cannot be doubted that such researches will prove of the utmost value in diagnosis and treatment, and it is difficult to see how such knowledge can be obtained without the aid of experiments on animals rendered insensible by chloroform.

The difficult subject of taste sensations has been investigated by L. E. SHORE of Cambridge, whose experiments were based on the remarkable action of a plant named Gymnema sylvestre, belonging to the Asclepiadeæ, the leaves of which contain about 6 per cent. of a substance resembling chrysophanic acid, which paralyses the sense of taste for sweets and bitters, but has no action on the gustatory perception of acids and salts. His observations show further that gymnema does not affect the tactile acuteness of the tongue or the perception of electrical shocks, and he has come to the conclusion that acids and salines in solutions of moderate strength excite two sets of nerves—one of general sensation and pain and the other of true gustatory function. In connexion with this subject ÖHRWALL has taken much trouble in examining the gustatory sensations excited in 125 fungiform papillæ, and has found that 21 per cent. are not sensitive at all, whilst 48 per cent. are sensitive to sweet, bitter and acid tastes. Some are sensitive to only two and a few to sweet only or to acid only, but no papilla was found which was sensitive to bitter only. In one of those exceptional cases, from which so much may be learned, the process of digestion in the stomach and small intestine was followed out by MACFADYEN, NENCKI and SIEBER. The patient was the subject of a hernia and after the operation had an artificial anus, the opening being at the ileo-cæcal valve. The duration of the passage of food from the mouth to this spot was found to be two hours at the earliest and the food of one meal continued to pass for from nine to fourteen hours. The food consisted of bread, meat, peptones, oatmeal, milk, eggs, sugar and beef-tea. The chyme as obtained from the end of the small intestine contained dissolved coagulable albumen, mucin, peptones, dextrin, sugar, inactive fermentescible and optically active paralactic acid, volatile fatty acids, especially acetic acid, the biliary acids and bilirubin. The acid reaction of the chyme was always due to the presence of organic acids. Neither indol, skatol, phenol, leucin, nor tyrosin was present, showing that in this case at least the albumen was scarcely touched by microbes in the small intestine, whilst the carbo-hydrates were decomposed with formation of acids.

Considering the prevalence of the habit of smoking and the enormous quantity of tobacco that is consumed comparatively few observations have been made from which its influence on the nervous system can be deduced. It is known to be injurious in various ways when taken in excess, but the effects of moderate smoking have attracted comparatively little attention. Some interesting facts have, however, recently been recorded by LOMBARD. He has shown that the effect of even one cigar of moderate strength is to reduce the nervo-muscular energy to one-fifth of its previous amount. The depression is of course only temporary, but complete recovery of the former strength does not occur until more than an hour has elapsed. The loss of power was determined by ascertaining what weight could be raised in a given time by the flexion of one finger to a cord passing over a pulley to which a weight was attached. On this ground alone it is advisable that boys should not be encouraged at too early a period to commence the use of tobacco. The action of nicotine on the third nerve and ciliary ganglion has been carefully studied by LANGLEY and ANDERSON.

Many isolated physiological facts have been noted, which it is difficult to arrange in any definite order. Thus BAYLISS and STARLING have demonstrated that there is no essential difference between the hearts of mammals and cold-blooded animals and that each is subject to the same varieties of nerve influence. KAUFFMANN, experimenting on the masseter and levator labii superioris muscles, finds that the quantity of blood traversing a physiologically active muscle is enormously increased, in some instances being as much as fivefold the ordinary quantity at rest. The capillaries become greatly enlarged, the tension in the arteries falls, whilst it rises in the veins. A new form of sugar has been found by SALKOWSKI in the urine of a patient taking morphia in excess. It precipitates copper oxide from an alkaline solution of the sulphate slowly but abundantly; it does not ferment nor does it polarise light. It may be identical with the sugar excreted after the ingestion of arabinose and xylose observed by EBSTEIN. KÜLZ has proved that glycogen can be formed from various proteids. In view of the predisposition of tubercle for the apices of the lungs MELTZER of New York has endeavoured to ascertain whether in normal breathing all parts of the lungs share equally in the respiratory act, and has come to the conclusion that probably the apices and back part of the upper third of the lungs do not participate in the breathing so largely as the other parts of the lungs. The pale aspect of Europeans in the tropics has often been a subject of comment and EIJKMANN has demonstrated that this is not due to any diminution in the globular richness of the blood or of the amount of acid hæmoglobin contained in the red corpuscles, but probably to congestion of the vessels of the abdominal viscera. DAREMBERG, experimenting with dogs, cattle, rabbits, pigeons, tortoises and frogs, finds that while the serum of the blood has little or no effect on the corpuscles of the blood of the same species it dissolves those of other species and genera which, if true of the plasma also, is of importance in transfusion. TIGERSTEDT gives a much lower estimate than is usually accepted in regard to the amount of blood propelled into the aorta at each systole, calculating it on various grounds to be less than two ounces. He finds the duration of one entire circuit to be one minute. AHLFELD states that rhythmic movements of the abdominal wall may be seen in women in the second half of pregnancy and attributes them to the intra-uterine respiratory movements of the fœtus. POEHL has investigated the action of spermin or extract of the testis, and has obtained a substance having the formula $C_{10}H_{26}N_4$; and LODE has made the curious calculation,

showing the prodigality of nature, that the number of spermatozoa in one ejaculation is upwards of two hundred and twenty-five millions, and that for one Graafian follicle eight hundred and forty-eight millions of spermatozoa are formed. It has generally been concluded that amyloid substance is a pathological product, but KRAWKOW points out that it is closely related to chitin and to colloidin obtained from colloid carcinoma.

Pathology.

The vast amount of pathological research that is now being carried on in laboratories in all parts of the civilised world, and which finds a record in scientific periodicals, renders it impossible to do more than indicate here a mere fraction of the additions to knowledge that are being made in this direction. Even the year-books which are specially intended to summarise these writings must find it difficult to collate all that is being done. As concerns this country it is fitting to mention the appearance this year of a *Journal of Pathology*, of which two numbers have been issued. The lack of such a medium of publication in addition to the Transactions of Societies has long been felt here, and the favourable auspices under which the new journal has appeared together with the high quality of its contributions seem to have already ensured it a prosperous career. As to the general subject-matter of pathological investigation there is no question that the foothold obtained by bacteriology becomes yearly more and more stable; and the question which is at present most engaging attention is the difficult but highly important one of the nature of the changes which produce immunity from the results of microbic viruses. Of the fact of such immunity—whether spontaneous or acquired—there is no dispute. It is one of the proven facts of science. But opinion is sharply divided as to the manner in which it is brought about—a division well shown in the interesting debate at the Pathological Society of London in the spring. A great deal turns upon the topic of phagocytosis, upon which Professor METCHNIKOFF has thrown so much light; but whether this remarkable process, quite as much physiological as pathological, is solely, if indeed mainly concerned in the production of immunity from infective disease, or whether it is in this respect supplemented or supplanted by the chemical action of the fluids of the body, are indeed moot points. The arguments are weighty on both sides. Although neither can be said to have come off victorious, much fresh knowledge has accrued from all that has been said and written in support of one or other view. The discoveries of the Drs. KLEMPERERS on the pneumonic virus, of Drs. BRIEGER, FRÄNKEL and SIDNEY MARTIN in diphtheria, of Dr. KITASATO, Dr. CATTANI and others in tetanus, are all in the same direction—that, namely, of emphasising the importance of the study of the toxines produced by bacterial life as the chief thing in the production of the phenomena of infective diseases. No one can doubt that it is not so much in its biological aspect as in its chemical that the future development of the parasitic theory of transmissible diseases will be made. It is important to note that renewed researches are being made to elucidate the mysteries of malignant growths by reference to parasitism; and several valuable and suggestive inquiries have been made which tend to show that the alleged parasite is of microzoic rather than micro-phytic nature. Should this really be so, the ingenuity of investigators will have to be turned in the direction of discovering media for the cultivation of these protozoic organisms if the conclusions are to be based on evidence as sound as that which now obtains for many specific diseases. The most recent study of the morphology of these "cancer organisms" is that by Drs. RUFFER and WALKER in the second number of the *Journal of Pathology*; whilst inoculation experiments on animals have been made by Drs. FISCHEL, DUPLAY and CAZIN with negative result, attributable to natural immunity on the part of the animals inoculated. To demonstrate the real nature of malignant disease may of course not immediately result in more efficient methods of dealing with it, but it will be an advance capable of infinite extension and application and do much to stimulate exertion towards its more effective treatment. One of the notable monographs of the year was that on amœbic dysentery by Drs. COUNCILMAN and LAFLEUR of the Johns Hopkins Hospital, Baltimore—a paper conclusive in its results as to the etiological connexion between these protozoic organisms and dysentery, and as important in its way as the demonstration of the plasmodium malariæ by Professor LAVERAN. As regards other diseases it may be noted that the announcement of the discovery of a bacillus in measles by Drs. CANON and PIELICKE of Berlin brought to mind the much prior claims of BRAIDWOOD; that in typhoid fever the question of identity between EBERTH'S bacillus and the bacillus coli communis has been raised, and that the advent of cholera has opened the way to studies upon its microbe and toxines, with the alleged demonstration of a method of producing immunity. The study of the blood in health and disease is being ardently pursued in many quarters. Drs. DALAND and SADLER have made numerous observations in hæmatometry in various affections; Dr. A. GARROD has conducted a similar inquiry in rheumatism; and a monograph on the general subject has been written by Dr. von LEMBECK. Dr. W. HUNTER'S recent lectures on hæmolysis were remarkable for the completeness with which he carried out his observations on a rarely explored ground. Sir W. ROBERTS has, in his Croonian lectures, enunciated many important facts upon uric-acid gravel and gout, and a new theory of renal dropsy enunciated by Dr. DICKINSON gave rise to a prolonged debate at the Medico-Chirurgical Society. Finally, amongst a few of the notable publications and republications of the year may be noted the work on Epidemics in Great Britain, by Dr. C. CREIGHTON; that on Ligature of Arteries, by Messrs. BALLANCE and EDMUNDS; the English edition of Papers on Acromegaly, by Dr. MARIE and others, issued by the New Sydenham Society; and the welcome volume of Dr. H. G. SUTTON'S Lectures on Medical Pathology.

Therapeutic Progress.

The occurrence of two epidemics during the year has necessarily diverted a great deal of attention from progressive study. Influenza in the earlier part of the year and cholera in the autumn produced a crop of specifics of which little need be said beyond noting that the efficacy claimed for them was, as usual, greatest during the decline of the epidemics. Notwithstanding these causes of instability a great deal of steady, honest work has been done towards giving greater precision to the knowledge of the value of older remedies, and also towards the investigations of the claims of the many new drugs which are ever at

our gates. One most curious phase of the year has been the persistent effort to prove the utility of various extracts and juices derived from the animal kingdom. This has been most marked in the treatment of myxœdema; extract of thyroid gland has been injected subcutaneously; patients have been fed on fresh thyroid glands, and an extract of thyroid gland has also been given by the mouth, while, from the surgical side, several cases of thyroid grafting have been reported. Dogs' serum has been used in tuberculosis and ox serum in syphilis, and it is reported that the serum of lambs' blood gave equally good results in the latter disease. Injections of testicle juice have been employed in cancer and in tuberculosis, while an extract of supra-renal capsules is said to have renewed vitality in moribund animals. Another subject that has attracted considerable attention is the employment of normal salt solution in various forms of collapse, whether due to vomiting, diarrhœa or profuse hæmorrhage, such as that occasionally met with in midwifery. In the last class of cases rectal injections of salt solution have also been advocated. The value of digitalis in various forms of cardiac failure has given rise to considerable discussion; although some writers have urged that it should be used in aortic regurgitation, and others have held that it is dangerous in this condition, there seems to be a general consensus of opinion that its employment should be determined by symptoms of cardiac failure, whether this failure be associated with aortic or mitral regurgitation. At the meeting of the British Medical Association at Nottingham a discussion was held upon cardiac tonics, when the value of digitalis was again considered in its relation to other cardiac tonics; experience appeared to indicate that the simultaneous use of caffeine and digitalis would often be more effectual than an increased dose of digitalis alone. The cardio-vascular action of theobromine and caffeine has been further investigated; under erythrophlœim patients with heart disease are said to breathe more freely, but an examination of the physiological action of the active principles of urechites suberecta indicates that from its cumulative properties its future employment as a cardiac tonic is improbable. Arsenite of copper in anæmia, the use of atropine as a hæmostatic and the value of camphorated oil in cases of collapse have also received attention. The administration of oxygen in various acute respiratory affections led to numerous communications; it was employed together with strychnine in pneumonia, alone in a severe case of broncho-pneumonia following influenza, and it was also recommended in asthma and in convalescence,—massage, electricity and oxygen being regarded as substitutes for change, exercise and sea air. Rectal antiseptic injections in epidemic influenza, and in advanced phthisis with large cavities, have once more received commendation. Phthisis has also been treated with creasote, guaiacol, camphoric acid and cantharidinates, but increased experience with the last named has given rise to some anxiety owing to the frequency of consecutive albuminuria. In the treatment of vomiting hydrochloric acid and strontium bromide have been recommended; chlorobrom has been used for sea-sickness and solanine for painful disorders of the stomach; orexin hydrochlorate has somewhat gained in favour as a stomachic and aid to digestion; salicylate of bismuth has been used in infantile diarrhœa and lactic acid in many other forms of diarrhœa, having given good results even in phthisis. Much has been written of the value of glycerine in the treatment of hepatic colic, for which, when due to gall-stones, large doses of olive oil have also been recommended. Thymol has been vaunted as an anthelmintic, but its range of application appears to be very restricted.

The therapeutic researches connected with the work of the kidney have occupied a limited range, although they have been of much importance. The action of diuretin has been studied both experimentally and clinically; in some cases it appeared to cause diarrhœa, in others the amount of urine passed seemed to decrease rather than increase, but it has nevertheless been used with great satisfaction in many cases of cardiac dropsy. Lactose, glucose and copaiba balsam have also been employed as diuretics. The Croonian lectures on the chemistry and therapeutics of uric-acid gravel and gout must also be mentioned in this connexion. An interesting question has been raised as to the action of quinine in malaria and the possibility of the associated hæmaturia being the result of quinine or being made worse by it. Contradictory statements have been made regarding the action of syzygium jambolanum in diabetes mellitus, and the propriety of relaxing the usual and rigid dietetic restrictions in diabetes has been dealt with in our columns. Salts of strontium have been recommended for the albuminuria of nephritis, and methylene blue, which deeply colours the urine, has been suggested in the treatment of neurotic patients.

Exalgine has been used with some advantage in chorea, but for the relief of pain it appears to be somewhat disappointing. Bromamide has been employed in a number of ill-defined cases of neuralgia. Carbolic acid has been injected hypodermically for tetanus. Hydrastinin, pilocarpine and bromide of strontium have been used in epilepsy. For the production of anæsthesia pental has been introduced, but in several cases it has given rise to alarming symptoms and it can hardly be considered a safe remedy at present. The same applies to bromide and chloride of ethyl as anæsthetics. The bearing of recent physiological and chemical research on the question of anæsthesia formed one of the subjects discussed at Nottingham, while the toxic action of impure chloroform and the comparative action of different brands of chloroform have been closely studied. The search for new hypnotics happily appears to be on the wane; trional and tetronal are said to be more prompt than sulphonal, but not superior to hyoscine in cases of great mental excitement. Further experience has emphasised the inconveniences of sulphonal, its tardy action and the persistence of its effects; hyoscine has again given cause for anxiety; paraldehyde has received praise both as a hypnotic and diuretic, and somnal—a new hypnotic—has not been sufficiently employed to allow of definite conclusions.

The treatment of diphtheria has been discussed at St. Petersburg, and during the year papers have appeared recommending for this disease the use of petroleum, antipyrin, tannin, zinc chloride and the removal of membrane and application of antiseptics. Typhoid fever has also been assailed by newer methods; chloroform in repeated small doses, calomel, salicylate of soda, creasote, naphthalin and alpha-naphthol have found adherents. Methylene blue and phenocol have been recommended in malaria, naphthalin in whooping-

cough, salipyrin in rheumatism, and paracresotic acid as an antipyretic.

The morality of the opium question and the ethics of opium and alcohol have been discussed in our columns at some length. The antidotal action of chloride of gold against snake poison has been disputed. Pilocarpine has been recommended in prurigo senilis and in selected cases of labyrinthine deafness, as have dermatol and europhen in syphilis and hydrogen peroxide as a diagnostic agent for detecting the presence of pus; inoperable malignant neoplasms have been treated by aniline dyes, and a possible future for toxines as new therapeutic agencies for the cure of infectious diseases has been forecast. Amongst the legion of newer remedies the following may be mentioned: Solveol, solutol, thymacetine, saprol, hæmol, hæmagallol, losophan and salophen, the last named being a convenient abbreviation for a combination of salicylic acid with acetyl-paramido-phenol ether. Where not influenced by passing fashion the therapeutic work of the year has been characterised rather by consolidation than by novelty and reconstruction.

Surgery.

The year that is just closing has not been marked by any epoch-making discovery or advance in surgery. But it would be idle to deny that surgery is a steadily advancing art and science, and that each year some gains are to be reckoned. When the history of surgery in the nineteenth century comes to be written the latter half will be seen to be the period of the greatest progress attained since the art was first practised. Surgical pathology has been revolutionised and surgical therapeutics have been to a large extent established upon a true scientific basis. Surgery has become at once more successful and more responsible. Our ability to control results has added a new weight to those borne by our predecessors. They when met by failure and disaster could only shrug their shoulders and appeal to Providence. We, however, know that such failure is generally to be traced to some error of omission or commission of our own. In all branches surgery is becoming more and more exact, and the old rough and inexact methods will soon be as extinct as the dodo. For an acute abscess the lancet and poultice are now not used, but the aseptic knife and careful antiseptic dressing. For a boil or carbuncle the old-fashioned crucial incision has been relinquished, being replaced by the removal of all the infective slough and tissue; and so through all the range of operative surgery. Thus excision of joints is replaced to a very large extent by arthrectomy. In operating for cancer of the breast it has been shown that it is very important to remove the entire gland, including all outlying nodules, the fascia over the pectoralis major muscle, the axillary lymphatic glands and the strand of tissue containing the lymphatic vessels passing from the breast to the glands. This is not empirical, but the result of painstaking pathological investigation and demonstration. The enucleation of tumours of the thyroid body is becoming more generally recognised as preferable to the drainage of cysts, the scraping out of soft tumours or excision of a part or the whole of the thyroid gland. This is a distinct advance. Again, the practice of applying a ligature to the main artery close above an aneurysm has been practised of late with great success. Such an operation, when conducted without infection of the wound, is shown to be unattended with the risks previously associated with it, and to be free from some of the disadvantages, such as recurrence of the pulsation, which belong to the Hunterian operation. Less and less is heard of the treatment of aneurysm by compression, as surgeons' confidence in their ability to conduct an aseptic ligature of an artery has increased. In abdominal surgery much is being done to place the treatment of diseases and injuries of the stomach and intestines upon the same satisfactory footing as that of diseases of the ovary. If the success has not been all to be desired, it is nevertheless highly encouraging. Lumbar colotomy is fast giving place to the inguinal operation, and excision of the rectum is established as an effective operation. In the practice of asepsis two things are forcing themselves more and more on surgeons' notice—the danger of infection through the organisms contained in the skin of the patient and on the surgeon's instruments and fingers and the little risk of infection through the air. Much greater attention is paid to the cleansing of the patient's and the surgeon's skin and more efficient means are used for the thorough cleansing of surgical instruments. Heat is the most trustworthy antiseptic and instruments are now commonly sterilised by dry or moist heat, the simplest and best means of all being to boil them for a short time in a 1 per cent. solution of bicarbonate of soda; this appears to be fatal to every bacterium and spore.

Obstetrics and Gynæcology.

The year now closing, like its predecessor, has witnessed a great activity in operative procedures and in the recording of results at the various societies devoted to obstetrics and gynæcology throughout the country. As a rule, little or no mention has been made of the treatment of the diseases peculiar to women by drugs or remedial measures short of surgical operations—a department of therapeutics which we think is being somewhat overlooked by the societies. At the meeting of the Obstetrical Society of London in January Dr. HERMAN gave an interesting analysis of the cases of nearly four thousand consecutive out-door patients at the London Hospital, from which he concluded that there is a marked relation between backward displacements of the uterus and prolonged hæmorrhage after delivery. At the same meeting Dr. INGLIS PARSONS brought before the Society his results of APOSTOLI'S method of treatment by electrolysis of fibromata and various morbid conditions of the uterus, which caused considerable discussion. These results were encouraging to the advocates of this treatment, for in fourteen of the cases of fibromata the hæmorrhage was reduced in all, in six of which no relapse took place, and in one the tumour entirely disappeared, pregnancy subsequently occurring. His general conclusions were that electrolysis when properly employed arrested growth in most cases and might even reduce the size; that it arrested hæmorrhage in nearly all and, as a rule, relieved pain and pressure symptoms. Dr. WATT BLACK, in his presidential address, dwelt especially on the losses during the previous year of Drs. BENNET, FORDYCE BARKER, CARL BRAUN and SCANZONI. At the meeting in March three papers on Cæsarean Section were read by Drs. CULLINGWORTH, LEITH NAPIER and SHAW, and a discussion of the subject occupied two meetings, and amongst others Dr. MURDOCH CAMERON of Glasgow related his interesting experience. At a subsequent meeting the relative position of Craniotomy and Cæsarean Section

was discussed. In October Dr. CULLINGWORTH read a very interesting paper on the Value of Abdominal Section in certain Cases of Pelvic Peritonitis based on an Experience of Fifty Cases. The important question debated was whether surgical interference was or was not frequently called for in cases of pelvic peritonitis. Dr. RENTOUL communicated to the Manchester Medical Association a lengthy paper dealing with the proposed registration of stillborn children The Fellows of the Edinburgh Obstetrical Society have shown considerable activity during the year and some very interesting and valuable contributions have been made. Amongst others, Dr. BERRY HART communicated a paper on the Alleged Growth of the Placenta in Extra-uterine Gestation after the Death of the Fœtus. This paper is of value in tending to clear up some difficult points in pathology. A contribution on the Structure of the Human Placenta, with Special Reference to the Origin of the Decidua Reflexa, by Drs. BERRY HART and G. LOVELL GULLAND, showed a great amount of careful investigation, which was undertaken to endeavour to explain the overwhelming frequency with which the fertilised ovum grafts itself on the uterine cavity. Dr. J. CLARENCE WEBSTER communicated some interesting details regarding the Female Pelvis in the Fifth Month of Pregnancy. He has also written an instructive work on the Anatomy of the Female Pelvis during the Puerperium — the result of his investigations carried on in the laboratory of the Royal College of Physicians of Edinburgh. An important feature in regard to the literature of Diseases of Women is the translation by the New Sydenham Society of a new edition of the excellent Treatise on Clinical and Operative Gynæcology (reviewed in our last issue), by Dr. POZZI, Surgeon to the Lourcine-Pascal Hospital in Paris—a work not limited to a French view of gynæcology, but recording the labours of practitioners in our own and other countries.

Ophthalmology.

The death of Sir WILLIAM BOWMAN at an age when he could still enjoy the learned leisure he had so well earned by a long and earnest devotion to science and to practice has removed from the scene the most conspicuous worker of late years in the important department of ophthalmology. His works live, and by their truth, not less than by their originality, have won for themselves a high and permanent position in medical literature. The lecture founded by the Ophthalmological Society in his honour was this year delivered by Professor LEBER of Heidelberg, who gave to an appreciative audience a summary of his careful investigations into the pathological processes which take place in the cornea and other tissues of the eye, as the result of punctures with needles charged with the spores of certain fungi. The observations he has made are of great interest, since they show that the spores of aspergillus fumigatus, for example, find a soil congenial to their growth in the substance of the cornea and that, probably through their excreta, the germinating spores kill the adjoining area of the membrane, whilst remarkable, not to say conscious, efforts are made by the leucocytes of the blood, which form a ring round the affected region, to limit and define their injurious action. Pursuing a similar line of research M. GILLET DE GRANDMONT has been able to obtain pure cultures of various fungi chiefly belonging to the staphylococcus form, which he has collected from corneal ulcers; whilst a distinguished practitioner, M. DE WECKER, has gone so far as to predict that in the near future it will be proved that all inflammatory affections of the cornea are of microbic origin. In accordance with this view he has devised a kind of shield which can be adapted to the parts surrounding the eye, and then becomes capable of retaining a quantity of antiseptic fluid in contact with the cornea. The employment of chlorine water, either pure or diluted, has been recommended by several ophthalmic surgeons of large experience in various forms of inflammation of the cornea on account of its powerful antiseptic action. Its application even when undiluted appears to be attended with but little pain, and such pain can easily be removed by the instillation of a few drops of a 4 per cent. solution of cocaine. The Graefe prize for the advancement of ophthalmological knowledge has been awarded to VON HIPPEL for his fairly successful efforts to effect the transplantation of the cornea. The principal feature in his method of treatment consists in the removal of a small area only of the cornea, taking care to preserve intact the membrane of Descemet, the whole proceeding being conducted under very strict aseptic conditions. Some of his results appear to have been excellent, the transplanted cornea retaining its transparency for many months. In this country the more severe forms of granular lids are rarely seen, but on the Continent the disease is of common occurrence and the heroic remedies to which the surgeon is apt to resort are well known in the method of treatment strongly recommended and practised by DARIER and ABADIE, which consists in placing the patient under chloroform, everting the lids with or without division of the outer canthus as may be required by the exigencies of the case, scarifying the granulations and then, which is the capital point of the method, brushing the surface with a brush having short stiff bristles, the surface being subsequently washed with a solution of corrosive sublimate and covered with iced compresses. This method, severe as it is, is said always to ameliorate and sometimes to cure the patient, yet the possibility of forming cicatricial bands should not be overlooked. The vexed question of the existence of a dilator muscle in the iris acting in opposition to the sphincter has been attacked by Mr. LANGLEY and Dr. ANDERSON, who, from a review of the evidence for and against the presence of such a muscle as well as from their own observations, think that the probabilities are in favour of the explanation that the sympathetic nerve causes a dilatation of the pupil, not by producing a contraction of the radially arranged blood-vessels, but partly by causing contraction of a dilator muscle and partly by occasioning inhibition of the sphincter muscle. In connexion with this subject it may be mentioned that NAWROCKI and PRZYBYLSKI have satisfied themselves by experiment that the dilator nerves of the pupil descend from the encephalon into the spinal cord, emerge by the anterior roots of the eighth cervical and the first and second dorsal nerves, then enter the rami communicantes, and thence pass into the loop of Vieussens. The cervical sympathetic and superior cervical ganglion then penetrate the skull and join the Gasserian ganglion and accompany the ophthalmic division. They reach the iris by the long ciliary nerves and do not enter the lacrymal ganglion. The curious observation of Dr. BROWN-SÉQUARD that the iris responds directly to the action of light, even when the globe of the

eye has been divided into an anterior and posterior half and when, therefore, all central nerve influence must have been abolished, has been corroborated by STEINACH, who attributes the contraction to the action of light upon certain pigmented muscle fibres, for movement is still observed when the nerve elements of the iris have been paralysed by atropine. Very careful measurements of the images of Purkinje made by TSCHERNING have led him to the conviction that towards the end of the act of accommodation the lens undergoes displacement downwards, a movement that centres the eye, but its axis always directed two degrees below the visual line. A very long and exhaustive report of a committee on colour vision was presented to the Royal Society who, in the course of the past summer, have held many meetings and examined a large number of persons. The committee have recommended that the Board of Trade, or some other central authority, should schedule certain employments in the mercantile marine and on railways, the filling of which by persons whose vision is defective either for colour or form, or who are ignorant of the names of colours, would involve danger to life and property. The testing for all candidates should be compulsory. They recommend HOLMGREN'S coloured wools test for colour and SNELLEN'S tests for form. It is to be hoped that the recommendations contained in this report will be fully carried out.

Besides Sir WILLIAM BOWMAN, others whose names are well known in Ophthalmology have passed away. Amongst these are Professor WHARTON JONES, who was for many years connected with University College Hospital; Sir GEORGE AIRY, the late Astronomer Royal, the defect of whose own eyes led him to recognise their error of refraction, to which he applied the term "astigmatism," and to devise the means for correcting it; ERNEST BRÜCKE, the distinguished Viennese physiologist, whose anatomical description of the eye of man, researches on subjective colours and discussion of the YOUNG-HELMHOLTZ theory of colour are well known. The first part of a treatise on the diseases of the eye by HIRSCHBERG, which promises to be good when completed, has been published, and new editions of the manuals of SWANZY, FUCHS, VOSSIUS and others. Amongst the smaller treatises on special subjects are those of SNELL on Miner's Nystagmus and of ERNEST CLARKE on Eye Strain.

Dental Surgery.

The subject which has raised the most lively interest and discussion this year is probably the question of "anæsthetics," especially with regard to the administration of a mixture of oxygen with the ordinary nitrous oxide. Mr. BRUNTON of Leeds, in a paper read before the British Dental Association, advocated where many teeth required removal the employment of the extended or "Howard" position of the patient—that is, with the head hung back quite below the end of the couch—a position which is safer and after a little practice gives the operator no more trouble than the ordinary one. Chloride of ethyl seems to be gaining popularity as a local anæsthetic and can be now obtained in tubes with screw tops, so that the quantity desired may be used without the loss of the remainder. Of new antiseptics hydro-naphthol is the only noteworthy one which serves as a mouth wash, a dressing, or in the form of a tooth-powder. The statistics with reference to the average of caries of the teeth amongst school children have been unremittingly investigated by the committee appointed by the British Dental Association, and show a very serious and unexpected amount of disease. A report of Dr. LAUFER with regard to the teeth of Russian children points to very much the same conclusion. Mr. HOWARD MUMMERY has added to the store of knowledge on the subject of the pathology of the teeth and the part which bacteria take therein. The subject of pathology is now considered so important that it is proposed to institute a professorial chair of bacteriology at some of the dental schools. Politically the most important step taken during the year and one which cannot prove to be other than of benefit to the public and the practitioner is the decision of the General Medical Council to put a stop to "covering."

Chemistry.

Inorganic chemistry has again been a favourite field of investigation. Since Mr. CROOKES' brilliant spectroscopic researches and his important observations on the genesis of the elements grave doubts have sprung up in many minds as to the elementary character of the bodies now called "elements," and it is extremely probable that many of them will after all turn out to be compounds. The spectroscope promises to lend valuable aid in demonstrating this. From the results of a long investigation by Mr. PARRY, for example, it would appear that iron is a very complex body and there is every indication that this metal will after all prove to be a chemical compound or, if not, an element subject to considerable allotropic modification. Further particulars of the interesting element fluorine, which was recently isolated, are given by its discoverer, M. MOISSAN. The colour of fluorine is paler than that of chlorine, but decidedly more yellow; its spectrum consists of thirteen bright red lines. M. TESLA'S lectures on alternating currents of high potential and frequency have attracted considerable notice. By M. TESLA'S researches a way has been opened up into a new region of inquiry. A new compound of carbon with barium (C_2Ba) is described by M. MAQUENNE, and is interesting chiefly on account of the readiness with which it yields remarkably pure acetylene when treated with water. The metal boron has been obtained in a state of purity by M. MOISSAN of fluorine fame. Professor THORPE and Mr. A. E. TUTTON have investigated the properties of phosphorus trioxide and have made some interesting observations. Not the least important of these is that the disease of the lower jaw acquired by persons employed in making lucifer matches is traceable to the action of the volatile phosphorus oxide which is largely formed when phosphorus ignites without firing. Limettin ($C_{11}H_{10}O_4$) is a crystalline substance discovered by Professor W. A. TILDEN in the essential oil of the lime. M. GENVRESSE has discovered an interesting and simple mode of synthesising tartaric acid from glyoxalic acid, which is calculated to throw some light upon its natural formation, more particularly as glyoxalic acid, the starting-point, is closely related to oxalic acid, which, as is well known, occurs naturally in certain plants. Mr. CROOKES, by employing alternating currents of enormous voltage, obtained visible flames composed mainly of burning nitrogen. The nitrogen of the air may thus be directly burnt into a powerful acid—nitric acid. Dr. LEPEL has also shown that the passage of electrical discharges through air (as lightning) results in the formation of nitric acid and nitric oxide. Mr. LUDWIG MOND has con-

tinued his researches on the action of carbon monoxide gas on metals. He has obtained two iron compounds, $Fe(CO)_5$ and $Fe_2(CO)_7$. The compound $Fe(CO)_5$ is formed when CO gas is passed over heated pure iron; the metal may be deposited on articles by merely immersing them in the resulting vapour. All attempts to "give wings" to other heavy metals, with the exception of nickel and iron, have failed. The compounds thus obtained are called "carbonyls."

The synthesis of azoimide (N_3H) (a very unstable and explosive body) has been effected by Professor WISLICENUS. Professor RAMSAY has investigated the impurities of chloroform. When the purest chloroform obtainable was exposed to light between March and July he found that it emitted an acrid odour when opened, due to the formation of phosgene gas (a compound of carbon monoxide and chlorine, $COCl_2$ ($2\,CHCl_3 + O_2 = 2\,COCl_2 + 2\,HCl$). The subject of flames has been vigorously attacked during the year by two able but independent investigators, Professors SMITHELLS and LEWES. The latter finds that the heavy hydrocarbons which occur in the non-luminous part of the flame are almost entirely converted into acetylene before they reach the luminous zone. In his opinion the luminosity of flame is therefore brought about by dissociation of the acetylene. Professor SMITHELLS' experiments led him to conclude that when the hydrocarbon is starved of oxygen the carbon burns preferentially to the hydrogen. Experiments upon the possible effect of long-continued applications of a copper sulphate spray used as a fungicide have been made in New York. In the soils containing copper more seeds germinated in almost every case than in the soils containing no copper. Analysis of the tops of tomatoes grown in the 5 per cent. soil showed 0·06 per cent. copper, proving conclusively that these plants can take up sulphate of copper by their roots. Grapes also were found to contain $\frac{1}{11\cdot3}$ gr. of copper per pound—a negligible and harmless quantity probably. Fluor-sulphonic acid has been obtained in a pure state by Professor THORPE by acting on hydrofluoric acid with sulphur trioxide; it combines with water with extraordinary violence. Aluminium as a useful metal is rapidly coming to the front. It is produced more cheaply and is finding consequently a more extended application. Major VON SILLICH, to mention one application, has found that aluminium gives a stroke on slate, and a German company has undertaken the manufacture of pencils based on this fact. They need no pointing and are well-nigh inexhaustible and unbreakable. The writing, which may be erased with a wet sponge, is as clear as with ordinary pencils and requires little more pressure. Aluminium also is largely used now for the manufacture of lenses, opera-glasses, scientific instruments &c., the advantage derived from its exceeding lightness being in some cases considerable.

Chemical science has this year sustained irreparable loss by the death of many of its most able investigators. Amongst them are such famous names as Professor KARL SCHORLEMMER, LL.D., F.R.S., Dr. T. STERY HUNT, Professor J. W. HOFMANN, Professor HERMANN KOPP, and Mr. A. NORMAN TATE. The following books have been the most important additions to chemical literature:—"Watts' Dictionary of Chemistry," Vol. III., by H. FORSTER MORLEY and M. M. P. MUIR; the "Chemistry of Paints and Painting," by A. H. CHURCH, M.A., F.R.S.; and a "Manual of Chemical Technology," by RUDOLF WAGNER, translated and edited by W. CROOKES, F.R.S. An event of interest during the year was the presentation of an address to the eminent *savant* Professor BUNSEN, by the Chemical Society, on the occasion of his attaining his fiftieth year of foreign membership.

Public Health.

A number of considerations have affected the condition of Public Health during the past year. In the first quarter the death-rate exceeded that for any corresponding quarter since 1879, the excess being largely due to epidemic influenza; and the deaths amongst people over sixty years of age were no less than 32·9 per 1000 above the average. During the next two quarters the general death-rate was below the average, but as the summer advanced a considerable outbreak of scarlet fever prevailed in the metropolis. This outbreak was never excessive in point of fatality; during a number of weeks when it was at its highest the death-rate was below the decennial average; but owing to notification, to the removal of the stigma of pauperism on those using the hospitals belonging to the Metropolitan Asylums Board, to the excellent repute attained by those hospitals, as also to the increasing demand on the part of the public for means of isolation, the strain upon the Managers was very severe. Early in November a diminution of the epidemic set in and it is now rapidly abating.

Cholera next appeared upon the scene. Travelling slowly from the valley of the Ganges through Persia and Afghanistan, it traversed Russian Turkestan, and early in the summer had attacked ports on the eastern and southern shores of the Caspian, whence it found its way into Transcaucasia and European Russia, and diffused itself very generally throughout European Russia. Aided probably by the emigration of Russian Jews it suddenly appeared in Hamburg; it spread in various parts of Northern Germany, of Belgium and of Holland, and was also conveyed to ports of the United States by European emigrants. Later in the year cholera also spread into Austria-Hungary. From North Sea ports, and notably from Hamburg, isolated cases reached this country, the first importation taking place on Aug. 25th. But earlier in the year cholera had already broken out in the suburbs of Paris; it was first called "cholerine" and its real nature seems to have been misapprehended. The disease, however, remained prevalent and spread to a considerable number of towns and places in the north-west of France, a notable epidemic occurring at Havre—indeed, some observers are induced to regard the Hamburg epidemic as due to an importation from France rather than to the movements of Russian Jews. Be this as it may, France has been very markedly infected, and the infection is still manifesting itself in certain localities, notably in Brittany. We do not propose to discuss in any detail the course or extent of the European cholera epidemic of 1892; its complete history has yet to be written, and our columns have already been largely occupied with accounts of its general progress and with carefully compiled reports of its special incidence on certain countries and towns. As regards this country we would recall the fact that between Aug. 25th and Oct. 18th twenty-nine cases of cholera occurred in England, that all the attacks took place in persons arriving from infected places on the continent of Europe, and that in no single instance was there any spread of the disease. This result

was largely due to the activity displayed by the Medical Department of the Local Government Board and the sustained labours of port health officers. But notwithstanding this a demand arose in certain ports for quarantine restrictions and for power to destroy numberless articles arriving from abroad on the ground that they might convey infection. The first of these requests probably received its deathblow at the recent meeting of port health officers at the Mansion House, and the second did not succeed in securing any extension of prohibition beyond that which was already in force as regards rags and the bedding of immigrants.

But the true test of our system of sanitary organisation against cholera has yet to come. We cannot impose any such restrictions on trade and traffic as will with certainty prevent extension of the disease beyond our ports, and hence it becomes of the utmost importance that sanitary reform should be actively carried on in our inland districts. Recrudescence of cholera must be looked upon as a most probable contingency next spring and summer, and reform is notably necessary as regards water-supplies, many of which are notoriously open to sewage or excremental contamination at their sources. With the object of securing the utmost available protection against this disease, a cholera survey is forthwith to be instituted by the medical staff at Whitehall; but no such survey can produce effective result unless the sanitary authorities and the public whom they represent determine to remedy those conditions which are known to be favourable to cholera extension.

For the moment another disease—namely, small-pox—seriously occupies the attention of public health authorities. It is very widely distributed throughout the northern half of England; in several places—such as Warrington—it has assumed epidemic proportions, and it is now spreading to places in the midlands and in the south, including the metropolis. The danger of a wide prevalence of this disease during the ensuing spring is the greater because of the season of the year in which the present distribution is showing power of further extension, and because of the growing neglect to enforce the provisions of the Vaccination Acts which has marked the period during which the Royal Commission on Vaccination has been sitting. In London the danger of an epidemic extension has been in part removed by reason of the system under which the isolation of small-pox patients has been carried out in the neighbourhood of populations; but in provincial towns the matter is different, and the Warrington experience seems to point strongly to the danger of aggregating such patients in the neighbourhood of dwellings.

Diphtheria is another disease which is causing anxiety, and its present spread and mortality in the metropolis afford a further confirmation of the view that this disease, formerly so closely identified with rural areas, is gradually taking its place as a serious cause of death in urban centres. By many persons the increase is attributed to ordinary sanitary defects of sewerage, water-supply &c., notwithstanding the fact that the incidence of the disease in our towns has corresponded with the precise period during which the greatest progress has been made in such matters in urban areas. Reviewing recent investigations into the etiology of this disease we are strongly inclined to regard its spread as more likely to be due to the development of throat affections amongst children aggregated in elementary schools and the use of milk from cows suffering from an analogous disease than to other causes.

Some important changes have been made during the year in the staff of the medical department of the Local Government Board. Sir GEORGE BUCHANAN, after long and distinguished service, retired last April from the post of medical officer, receiving the honour of knighthood on the occasion. He was succeeded by Dr. THORNE THORNE, C.B., whose post as senior assistant medical officer was filled by Mr. W. H. POWER. Other changes followed, and the medical staff has, we believe, just been strengthened by the addition of two permanent inspectors, as also by the appointment of four temporary inspectors, to assist in performing the additional duties which it is expected will devolve on the medical department during the ensuing year. During the past year cholera largely occupied the attention of the staff; but further progress was made with the investigations into the causes and intimate pathology of epidemic influenza, the current work was maintained and amongst some of the more important reports issued were two on enteric fever in Rotherham and the neighbourhood and at King's Lynn, and one on typhus fever at Wigan. The two former reports have a strong bearing on the subject under the consideration of the Royal Commission on Metropolitan Water-supply, especially in reference to the need for maintaining a standard of purity in the sources of our public water services beyond that which at present prevails in many parts of the kingdom.

Forensic Medicine.

The year 1892 will be marked in forensic annals chiefly by the poisoning by strychnine of several "unfortunates" in London by THOMAS NEIL CREAM. A full account of the tragedy has been given in THE LANCET. Suffice it here to say that the criminal had led a roving life between this country and the American continent, that he had been imprisoned abroad for complicity in causing the death of a man by poison, and that he sought to fix his heartless and apparently motiveless murders on innocent people with attempts at blackmail. Two cases of murder somewhat resembling each other have been disclosed and the perpetrators convicted. We refer to the crimes of FREDERICK BAILEY DEEMING and ANDREW MCRAE. DEEMING was tried at Melbourne for the murder of his wife, whose body was found beneath the cemented floor with the skull broken and the throat cut. The murderer had disposed of a previous wife and her children in a similar way in this country, and the discovery of their remains—also cemented down—was made about the same time as the murder in Melbourne was brought to light. Insanity was set up in defence, but the plea failed, and DEEMING was executed. MCRAE'S case is noticed in our present issue. For the first time since the passing of the Marriage Dissolution Act a plea of irresponsibility on the ground of insanity has been advanced in the case HANBURY *v.* HANBURY. The respondent was accused of acts of cruelty and adultery, and it was in answer to these that inebriety and recurrent attacks of mania were set forth as legal exoneration. The jury, however, ignored the contention, and found that the misdeeds were committed during the intervals of the attacks. An important alteration has been made by the Coroners Amendment Act of 1892, whereby several blots on the previous law have been removed. It is now legal for a deputy-coroner to discharge the duties of the

office rendered vacant by the death of his principal, whereas formerly he could only do so during the absence of the chief. Borough coroners, prior to the passing of the Act, were obliged to nominate barristers or solicitors as their deputies. Now this restriction has been removed. Lastly, a period of three months, instead of ten days, is now fixed as the period during which a coronership remains vacant. Poisoning by ptomaines contained in tinned foods has unfortunately been further illustrated, and some additional facts relative to the nature of the toxic substances have been made known. The subject, however, may still be regarded as in its infancy. Death after vaccination has on several occasions been investigated by coroners' juries, but in each instance it has been shown that vaccination has only had a secondary share in causing the fatal issue. Pending the report of the Royal Commission on Vaccination it is not necessary to add to what has recently been reported in THE LANCET. Death certification and registration has been the subject of a leading article, wherein we pointed out the prevalent abuses and suggested an appropriate remedy for them. Our records have shown that criminal abortion, baby farming and cruelty to children are still all too prevalent, but much has been done to expose the criminality and cruelty attendant on these illegal acts and, we trust, at the same time to lessen the frequency of their occurrence.

The Royal College of Physicians of London.

The year has been on the whole an uneventful one at the Royal College of Physicians. It has not even seen the determination of the legal question at issue between the College and the General Medical Council respecting the complete and independent character of the College licence, which has been called in question by the Council. The relegation of the Gresham University Charter to a Royal Commission induced the College to have its position in the matter laid before the Commission by the President (Sir A. CLARK), the Registrar (Dr. E. LIVEING), and Drs. NORMAN MOORE and ALLCHIN. A noteworthy declaration of the College upon the question of the transfer of practices between Members and Fellows as being contrary to the traditions of the College "and derogatory to the position of a physician," has had its natural sequel in an addition to the College by-laws. In educational matters the scheme for a five-years' curriculum was somewhat hurriedly pushed through the College in conjunction with the Royal College of Surgeons,—a scheme which introduces important changes in the earlier and later parts of the student's career. The changes in respect to physiological teaching have not been such as to commend themselves to the schools, and will doubtless soon be subject to fresh revision; but the fifth year of clinical work has on the whole been well planned. The period of testing its efficacy has, however, yet to come. Sir ANDREW CLARK was chosen President for the fifth time, and he delivered on the occasion an address which dealt largely with the University question in which he has shown so much interest. A hastily convened comitia in the summer vacation issued a memorandum upon cholera at the request of the Local Government Board, but happily the occasion for its being acted upon did not arise. We had occasion to express our opinion on this memorandum at the time of its issue (*vide* THE LANCET of Sept. 24th). An influential committee has been appointed to undertake the decennial revision of the nomenclature of diseases. By the resignation of Mr. W. GURNER of his office of bedell the College has lost the services of an old and valued official. The vacancy thus created was filled by the appointment of Mr. FLEMING. The Gulstonian lectures were delivered by Dr. SIDNEY MARTIN, who dealt with the chemical pathology of diphtheria compared with that of anthrax, infective endocarditis and tetanus; the Lumleian lectures on Certain Points in the Etiology of Disease were given by Dr. PYE-SMITH; and the Croonian lectures on the Chemistry and Therapeutics of Uric-acid Gravel and Gout were delivered by Sir W. ROBERTS. The Milroy lecturer was Dr. FRANCIS WARNER, who gave the results of an exhaustive Inquiry as to the Physical and Mental Condition of School Children; and the Bradshaw lecturer was Dr. GEE, who took for his subject the Signs of Acute Peritoneal Disease. Dr. BRIDGES delivered the Harveian oration, which was followed in the evening (St. Luke's Day) by the recently revived Harveian dinner.

The Royal College of Surgeons of England.

The year which has now closed will always be memorable in the history of the Royal College of Surgeons; for during it the important case of STEELE *v.* SAVORY was brought to a conclusion, the decision of the judge being given against the plaintiff as representing Members of the College; and there has been manifested a desire on the part of the Council of the College to extend the privileges of the Fellows. With regard to the trial mentioned above, the details are still sufficiently fresh in the minds of our readers to make detailed reference to it unnecessary. The Fellows and Members have gained a common room at the College, where they can meet, read the papers, write letters &c.; and the principle of calling the Fellows together separately from the Members for consultative purposes has been established. The first meeting of the kind was held on July 7th, after the election to the Council. The object of the meeting was said to be "to afford the Fellows an opportunity of expressing their views on any points they might wish to bring forward." The committee which recommended these changes also considered another question—the advisability of permitting Fellows to be present at meetings of the Council, but did not recommend it.

The ninth annual meeting of Fellows and Members was held on Nov. 3rd, when the report for the collegiate year was presented to the meeting by Mr. BRYANT, the President. The report, which was a full one, was noteworthy for the changes which had been made in the arrangement of its contents, the subjects treated of being placed under their various headings instead of being scattered in fragmentary reports of meetings of Council or committees, and were thus much more accessible to those taking an interest in the work of the College. The proceedings were without particular importance. It has been agreed to commemorate the jubilee of the Fellowship during the course of next summer, and a plan has been approved, the details for the carrying out of which have been handed over to a committee. At the annual election of Members of the Council Mr. THOMAS SMITH and Mr. DURHAM were re-elected, and Mr. TWEEDY and Mr. HOWARD MARSH were elected Members of the Council. Mr. THOMAS BRYANT was chosen President of the College for the third time; Mr. DURHAM and Mr. CHRISTOPHER HEATH Vice-Presidents (the former had held the office since the

death of Mr. BERKELEY HILL early in the year). We have fully reported in the columns of THE LANCET the changes which have been necessitated in the examinations owing to the adoption of the five years' curriculum, also the changes which have been made in the composition of the various examining boards. Visitors to the College at the time of the election of members of Council were very much impressed and pleased with the changes and improvements which have been made in the buildings. It contains undoubtedly one of the most complete museums of the kind in the world, and the arrangements and furnishing of both museums and library are very satisfactory. It has been necessary to do a good deal to the drainage of the place and the expenditure of considerable sums of money has been called for. The Council considers, however, that it has now got to the end of the heavy expenditure and will be able to retrench. The needful improvements cannot, however, be considered as fully completed until the theatre has been reseated; it is at present about the most uncomfortable lecture theatre we know of. The finances were not quite satisfactory, judging by the yearly report. There was then a balance of £450 in respect of revenue over expenditure, but the extraordinary expenditure of £11,209 for extension of the College premises and the Examination Hall buildings had necessitated a sale of £12,000 worth of stock. There is, however, about £1400 to be paid for drainage works, and it is doubtful if the balance expected next year will be realised. The loss of income from sale of stock will amount to some £200 a year. We would again urge some diminution in the present rate of ordinary expenditure for a time. The Bradshaw Lecture was given by Mr. CHRISTOPHER HEATH, who took for his subject Diseases of the Nose, and the Morton Lecture by Dr. SIMS WOODHEAD. No candidates sent in dissertations for either the Jacksonian or College Triennial Prizes. Mr. F. G. HALLETT has performed a useful task in compiling a catalogue of the busts and objects of art in the College. In addition to the loss of Mr. BERKELEY HILL, a Vice-president, the Council has received intimation of the death of several past members of its body, including EDWARD COCK, SAMUEL A. LANE, F. LE GROS CLARK, C. HAWKINS and JOHN WOOD.

Army, Indian and Naval Medical Services.

There is not very much to chronicle in connexion with the public medical services for the past year. Promotion has not been particularly active in 1892, but, as regards the Army Medical Staff, at any rate, it promises to be more so in the coming year. As regards the medical staff, moreover, it cannot be said that the adoption of the new military designations for medical officers has brought about a state of perfect contentment. It is difficult to find abbreviated titles for ordinary every day use. That of Brigade-Surgeon-Lieutenant-Colonel, for example, is a great mistake. It is manifestly such a cumbrous and lengthy designation that it cannot be generally used in military or social life. The medical officers desire to have their service made into a Royal Medical Staff Corps or a Royal Corps of Surgeons in place of the present organisation, and in that case the majority of them would prefer purely military titles to the present mixed ones. It must be remembered that all the recommendations contained in the report of Lord CAMPERDOWN'S Committee have never yet been carried out. The main points on which medical officers are desirous of seeing changes made, in addition to the foregoing, are that, in the first place, as regards terms of foreign service, the old rule of five years for India should be reverted to. This is a very reasonable desire, for the increase in the length of foreign tours injuriously affects their health and is otherwise prejudicial to their interest. In the present depressed value of the rupee it cannot any longer be said that a medical officer obtains any financial advantage to recoup him for the risk incurred to health by additional service in India. Next, that the rank of Brigade-Surgeon should be officially recognised by the Indian Government; and, lastly, that more latitude generally should be given to medical officers to effect exchanges with one another, subject to the approval of their departmental head. There has been a good deal of discussion of late in regard to the extension of service beyond the age retirements laid down for medical officers. We have never concealed our opinion on this subject. As a matter of principle and as the only fair and just method of administration it seems to us that Royal Warrants and Regulations should be strictly adhered to in this respect. The retention of officers beyond age limits should be exceptional and for the good of the service only; and, as a rule, the officers so retained should be seconded in order to prevent blocks in promotion and consequent injustice to others. This applies, of course, to all the three medical services—Naval, Medical Staff and Indian Medical Service. A new Order has been issued to the effect that officers of the Army Medical Staff are in future to be detailed for general service in India, their posting and exchange to presidencies being arranged by the principal medical officer, under the orders of the Commander-in-Chief of that country. Hitherto the custom has been to detail the medical officer in this country, when placing him under orders for India, for the particular presidency in which he is to serve. The new Order has its advantages and disadvantages and the judgment in regard to it will no doubt be influenced by the effect it will have on the interests of the individual officers concerned respectively; but, on the whole, we believe that the change, which has been effected no doubt for service and departmental considerations in India, will not be generally popular. It opens the door to patronage and possible abuse, and it will certainly require to be honestly and judiciously worked. We have during the past year striven to keep our readers *au courant* with the progress of medical work and events in India and the Indian medical service. There is little to add in connexion with the events which have taken place in the past year in the Naval Medical Service, the members of which appear to be well satisfied with the rank and titles about which there has been so much discussion in the military services. It has been stated that the late Sir RICHARD OWEN served for a brief period as a midshipman in the Royal Navy; if so, the naval service may be said to share with the medical profession the loss of one of the most distinguished names in science of this age by his death, but that service with the rest of us may rejoice that in Professor HUXLEY they still possess an authority of the highest scientific reputation and distinguished also in the walks of philosophy, literature and general culture.

Volunteer Service.—The Volunteer Medical Service has during the past year materially improved in efficiency—rank having been more clearly defined, and the proficiency examination having been rendered compulsory within two years of

gaining a commission. These changes have tended to raise the standard of the service. With the view of assisting medical officers to pass the proficiency examination classes have been held several times during the year, under the auspices of the Volunteer Army Service Institute, which have been well attended and found to be very helpful. Greater interest has been taken in Bearer Company Drill and larger numbers of men from the various regiments have gone through courses of instruction and gained the Army Ambulance certificate. In every direction progress in the Volunteer Medical Service is evident. For the first time a number of decorations have been conferred upon this service and upon medical officers belonging to it.

The General Medical Council.

The General Medical Council held its two usual meetings. At the first the members sat five days—from May 24th to May 28th inclusive—and at the other (in November) only four days—from the 23rd to the 26th inclusive. It is obvious that the Council, though spending rather less time over its business of late years, has more and more responsible duties to discharge both to the public and the profession. The *personnel* of the Council has been altered by the lamented death of two of its distinguished members—Dr. GEORGE YEOMAN HEATH and Sir GEORGE MACLEOD. The former is replaced by Dr. PHILIPSON in the representation of the University of Durham and the latter by Dr. DAVID CALDWELL MCVAIL in the representation of the Crown for Scotland. The University of Aberdeen has no longer for its representative Professor STRUTHERS, who laboured much and well in the service of the Council. On the expiration of his term of office Dr. ANGUS FRASER was elected in his place. One chief work of the Council was to appoint an Inspector and Visitors to report on the examinations of the various bodies. Some of these reports will come up for discussion at the meeting in May next. Questions of professional behaviour arose in several cases at both meetings. In the result the names of five practitioners were ordered to be erased from the Register, three for "infamous behaviour in a professional respect," and two on the ground of having been convicted of felony. A very important motion by Sir JOHN SIMON, urging the duty of the examining bodies in the first instance to deal with irregular conduct in their diplomates, was properly postponed till the next meeting of the Council in consideration of the fact that the case which suggested his motion is the subject of appeal. At both meetings of the Council, in connexion with the complaints by the War Office of defective preliminary education in applicants for army medical appointments, the question of the examination in arts, held by the Apothecaries' Society, was raised. It is not in evidence that this examination is specially to blame; but it is used as the portal to the profession by hundreds who do not take the Apothecaries licence. It is naturally objected that the *potestas clavium* of the profession conceded or delegated by other bodies to the educational authorities of the country should reside so largely at Blackfriars. The Apothecaries are tenacious of their old privilege, and the question is still the subject of somewhat unseemly difference between the Council and a body which depends on it for coöperation. On the unsatisfactory state of the law, especially in France and Switzerland, prohibiting English practitioners from practising, even among their own compatriots, in those countries, the President (Sir RICHARD QUAIN) spoke strongly and explained that statements had been prepared of the state of English law, in accordance with the wishes of the Council, to be forwarded by the Foreign Office to countries concerned. At the November meeting an important memorial, signed by over a thousand practitioners, was presented to the Council on the subject of Medical Aid Associations from Dr. LESLIE PHILLIPS, representing the Medical Defence Union, complaining that the way in which such institutions are worked is injurious to the public and the profession alike. Counter-representations were made on behalf of the associations. In the end the Council resolved that the question should be investigated and for this purpose appointed a committee of six of its members "to fully sift the matter and report to the Council at its next session." There is reason to hope that both the associations and their medical officers will assist the Council to come to a right judgment on this subject. The Council also determined at the November meeting to apply the regulation as to "covering" unqualified assistants to the case of registered dentists and to give them due notice, so that ignorance may not be successfully pleaded. Dr. RENTOUL presented a memorial complaining of the action of the Obstetric Societies and certain other parties in giving to women certificates which purported to be "qualifications" in midwifery, contrary to the spirit and letter of the law. The Council agreed to communicate with the bodies concerned and to advise them that such certificates should be expressed in language that would not convey the impression that they are legal qualifications to practise midwifery.

The Proposed Teaching University for London.

AT the close of the year 1891 the Draft Charter promoted by King's and University Colleges and agreed to by the representatives of the London Medical Schools had been passed by the Lords of the Privy Council, and was awaiting the assembling of Parliament for its assent. Permission had been obtained before the meeting of Parliament for changing the name from the "Albert" University to that of the "Gresham," and the Gresham Grand Committee had given the scheme their full support. But during the Parliamentary recess a very formidable opposition had arisen, and it became evident that the passing of the Charter was seriously imperilled. As soon as the medical schools of London had consented to become constituent Colleges in the new University the authorities of the Victoria University and the provincial schools of medicine assumed a hostile attitude to the movement and took every means to defeat the passing of the Charter, especially in the House of Commons. In spite of the protests and disclaimers of the deans of the London medical schools a statement was widely circulated to the effect that the new University was intentionally being established in order to lower the standard of medical degrees, and that this was sure to be brought about if the Senate contained such a large representation of the medical schools as was proposed in the Charter. We pointed out the unfairness and injustice of these statements, but they evidently considerably influenced the minds of the provincial members of Parliament, especially of those from the north of England and from the district around Birmingham. The opposition from the provinces was sup-

ported by many members of the Senate and Convocation of the University of London, by the authorities of Bedford College, the Birkbeck Institution and other similar bodies, whilst the University Extension Society agitated a much wider scheme for the education of non-collegiate students. Professor KARL PEARSON and some other professors in the Faculty of Science at University College actively urged the formation of a Professorial in opposition to a Federated University. On March 3rd a deputation representing these interests waited on Lord SALISBURY, at which Vice-Chancellor RENDALL and Mr. CHAMBERLAIN were the principal speakers, and it was soon apparent that the Government would give way to the Parliamentary opposition, although Lord SALISBURY pointed out that the objections then raised should have been placed before the Lords of the Privy Council, who would have duly inquired into their value. On March 9th the Draft Charter was remitted by Mr. BALFOUR for reconsideration and on April 25th a new Royal Commission was appointed "to consider and if they think fit alter and amend the proposed Charter remitted in compliance with an address of the House of Commons, so as to form and report to us a scheme for the establishment under Charter of an efficient Teaching University for London." The members of this Commission are Earl COWPER (the chairman), Lord REAY, Bishop BARRY, Lord PLAYFAIR, Vice-Chancellor RENDALL, Professors RAMSAY and SIDGWICK, Canon BROWNE, Mr. ANSTIE, Q.C., and Mr. R. C. PALMER as representatives of the various lay interests concerned in the question; whilst medical education is represented by Sir W. S. SAVORY, Sir G. M. HUMPHRY and Professor BURDON-SANDERSON. London medical teachers who are not specially connected with the corporations, and the general medical practitioners who are vitally affected by changes in London medical education are conspicuously missing from the *personnel* of the Commission. The sittings began on May 21st and on the 28th the first witnesses were heard, and the proceedings are likely to run well into February before the evidence will be completed. A large number of persons have given lengthy and contradictory opinions as to what ought really to constitute a University in London, but all are in the main agreed that it should specially concern itself with University education in London and not be merely an Imperial Examining Board. If one University is to combine both functions it must delegate the duties specially pertaining to them to two separate committees of the Senate, and thus reconstitute itself into a two-sided University. The evidence of the medical witnesses called before the Commission was practically a restatement of that given before the former Commission, who fully recognised the medical side of the question and reported that the London medical student was suffering from a grave injustice and that steps to remedy the grievance ought to be taken. During the past month a correspondence in *The Times* has shown us that the supporters of the Professorial University are scarcely agreed as to what is the exact basis of their scheme. Professor HUXLEY wishes to retain the title and prestige of the University of London and to "federate" the technical schools as colleges of the University, whilst Professor PEARSON will not hear of a University with federated colleges, and has consequently resigned the secretaryship of the Association for promoting a Professorial University in London. The new departure has the support of many of the scientific Fellows of the University of London and of the Professors at South Kensington, but will probably be strongly opposed in Convocation. We see no provision for meeting the medical difficulty in Professor HUXLEY'S new scheme, which so far has only been shadowed forth in outline.

British Medical Association.

The sixtieth annual meeting of the British Medical Association was held at Nottingham on Tuesday, July 26th, and following days. The President of the year, succeeding Dr. ROBERTS THOMSON of Bournemouth, was Mr. JOSEPH WHITE, senior surgeon to the General Hospital, Nottingham. The meeting was characterised by a fairly good attendance of members and by the great variety of subjects treated. A noticeable event was a motion by Dr. S. H. GALTON to admit women to the membership of the Association and by its being carried without a dissentient voice. The addresses delivered were of much interest. In that of the PRESIDENT the advances of British medicine since the last meeting of the Association in Nottingham, thirty-five years ago, including Preventive Medicine and Surgery, was ably traced. The other addresses by presidents of sections, Dr. RANSOM, Mr. CROFT, Sir W. FOSTER, Mr. BEVAN LEWIS, Mr. VICTOR HORSLEY, Dr. MARSHALL, Dr. BROOKHOUSE and Dr. HAYES, were original and suggestive. Amongst the more noticeable features of the addresses was an attack by Mr. VICTOR HORSLEY on the too exclusively anatomical and post-mortem character of pathology as heretofore studied; also a needed protest by Dr. GAIRDNER of Glasgow against Touting in Medicine, or the tendency to take our therapeutics from what Americans call "the machine," without sufficient organisation for observation and report, by practitioners in all parts of the country. Amongst important discussions we may mention those on Liver Surgery, on Post-partum Hæmorrhage, on Tubal and Uterine Disease, on Psychoses after Influenza, on the Treatment of Dyspnœa, on the Treatment of Ringworm, on Therapeutics &c.

The Church Congress.

The public interest in medical subjects was excited by the Church Congress at Folkestone, where a discussion was raised on "anti-vivisection." This subject, or the way in which it was handled on both sides, seemed to displace and supersede all topics merely theological, and for weeks afterwards the sound of battle was in the air between those who view experiments on animals from a theoretical point of view and those who find themselves face to face with disease in the whole animal creation and whose mission it is to understand and to control it. Without defending all the expressions used we have no hesitation in saying that the cause of science and true humanity has been immensely strengthened by the discussion. It leaves, of course, many well-meaning people "of the same opinion still." But amongst men and women with any ordinary sense of proportion the case is established by overwhelming considerations for a careful and regulated use of the lower animals, wherever possible under conditions of anæsthesia, for the purpose of investigating the nature and processes of disease and the action of remedies.

Hospital Mirror.

The columns which we have devoted to the description and illustration of cases under the care and treatment of members

of the profession in our public hospitals and dispensaries throughout the world have been filled as usual with accounts of more than passing interest. We have continued the custom of making editorial comments on the cases as they have been brought forward from week to week, and have received letters expressive of the appreciation in which such remarks are held by our readers. In the review of a year's work done in this department we are, however, necessarily obliged to limit the extent of our selections and omit reference to many cases of importance. The value of saline injections into the veins in certain conditions is exemplified very strongly by the record of the cases of patients in whom it appeared probable that a fatal result would have ensued without its employment: a child aged nine months, in a state of collapse after long-continued vomiting and diarrhœa; a woman aged twenty-eight, who became collapsed with signs of internal hæmorrhage some hours after ovariotomy; a man aged twenty-eight, who had lost much blood as the result of a gunshot wound of the leg, on whom amputation was performed after the injection, and although another injection was afterwards required recovery ensued; a patient aged eighteen, who had lost much blood as the result of a deep burn extending to and implicating the popliteal artery, was enabled to undergo amputation and recovered; a railway shunter, who was much collapsed after crush of both legs, underwent a double amputation, and although the saline solution was not employed before the operation it was injected with great advantage before the patient was removed to bed. In two other instances it was also used, but the cases were more desperate and the patients ultimately died; one had received very extensive internal injuries, the other a burnt wound of the axilla from which hæmorrhage requiring ligature of the axillary artery occurred, this was followed by gangrene of the arm, secondary hæmorrhage ensuing at a later date, and the arm was amputated. Other cases of severe injury are described, notably one in which the patient had received a stab wound in the left loin through which the colon protruded, and a second in the practice of the same surgeon of a girl aged eighteen who had received a stab in the left side penetrating the pleural cavity and diaphragm, with protrusion of omentum through the chest wall. Both patients recovered. A case of fracture of the anterior inferior spine of the ilium from excessive muscular action in a man aged thirty-five is apparently an example of an injury hitherto unrecorded, but rests on the authority of a careful observer. Two cases of recovery after severe injuries to the spine are worthy of attention. A man aged thirty-eight whilst working in a tunnel was bent forwards between a heavy beam of timber and the ground, his body being in a sitting position. On admission there was complete paraplegia with much shock, loss of sensation as high as the seventh ribs in front, priapism and retention of urine; on the fourth day he had pains running down the inner side of the arms with girdle pains; on the sixth day a depression could be felt in the position of the second dorsal spine, and after reduction of this under chloroform recovery gradually ensued. The catheter was required for six weeks, but no cystitis resulted. A year later the man could walk four miles with the aid of a stick. A man who had fallen into a chalk pit received a fracture of the second lumbar vertebra and was at first paraplegic and suffered from retention, subsequently some improvement resulted, various muscles partially recovering and the patient regained power over the bladder. As the symptoms became stationary laminectomy was performed nine weeks after the injury with satisfactory results, for in a few weeks the patient could walk up and down stairs without any support; this is an example of the class of spinal injury in which the operation of laminectomy is specially indicated. Excision of the head of the femur was performed in the case of a boy aged eleven years; the head of the bone had been displaced between the layers of the abdominal wall and was lying midway between the umbilicus and pubes; below the latter reduction could not be effected. The amount of shortening immediately after the accident was three inches; after the operation (which did not permit of the femur being brought lower down) it amounted to two inches. The recovery of a patient from traumatic peritonitis with severe symptoms is recorded, also a case of complete rupture of the intestine, in which the history was misleading and the extent of the injury unsuspected until examination after death which was due to peritonitis. Few cases of bilateral empyema are on record. We have given particulars of two: in a child aged ten years the treatment was by resection of rib—first on the left and eleven days later on the right side; the collection on the right side was localised. In a child aged eighteen months the left side was treated by resection; on the twelfth day pus was found on the right side, but the child died a day later somewhat suddenly, before any further treatment could be carried out. We have published cases of abdominal section, for recurrent pelvic peritonitis (a most important series); for primary carcinoma of the kidney; for excision of malignant growth of cæcum, the fæcal fistula which was formed in the first instance being subsequently cured by resection; for the performance of LORETA'S operation; for the removal of the uterus. A patient suffering from fæcal fistula, the result of ulceration of the cæcum and perityphlitic abscess, was treated by lateral anastomosis of intestine, SENN'S bone plates being used; recovery was apparently complete in six weeks' time; the fistula was of six months' duration and had not improved after scraping &c. A recovery after excision of the vermiform appendix, which was found in a perityphlitic abscess, is described; the patient—a boy of twelve—had suffered with symptoms referable to the cæcum for ten days. As examples of more recent departures in surgery we may mention a case of trans-peritoneal ligature of the left external iliac artery for aneurysm occupying a high position in the inguinal region, the patient, aged thirty, making a satisfactory recovery; a case of thyroid grafting for myxœdema in which the graft appeared to live and the patient improved, but relapsed amid the less favourable surroundings of her own home; a case of open tenotomy of the structures occupying the popliteal space in old-standing contraction of the knee-joint, the good effect of this method, in certain cases, being clearly shown.

The Medical Societies.

In our annual retrospect of the work of the medical societies the increased demand on our space, in conjunction with the ever-increasing volume of the contributions, has compelled a rather different method of review. We have therefore, so far as practicable, gathered together under general and special headings the communications that have

been noticed without reference to the Societies which served as their birthplace. It has been found possible to refer to but a moiety of the many valuable essays that have been tendered; for the enlightening and critical discussions which have followed their production we must ask our readers to refer to the full reports which we have published from week to week. To observant students of the progress of the medical art these reports of themselves appeal eloquently as evidences of honest work. The activity displayed by those who, though engaged in the active practice of their profession, yet find time to place fully before their brethren the results of their labours at the bedside and in the laboratory can call for nothing but hearty commendation. The presidential address of Mr. HUTCHINSON at the Medical Society on Names, Definitions and Classifications in Disease is one that is worthy of being considered by both physicians and surgeons, for it abounds in practical hints on these subjects which are the outcome of a life experience. In the domain of Medicine the treatment of Hydatid of the Lung was fully discussed, the subject being introduced in a paper by Dr. ORD and Mr. ROBINSON. Again, later, it was dealt with in a paper by Dr. HECTOR MACKENZIE. Dr. GOODHART, in his admirable Harveian Lectures, dealt with the Common Neuroses, or the neurotic element in disease and its rational treatment. Dr. MITCHELL BRUCE and Mr. MARMADUKE SHEILD communicated a paper on Gelatiniform Degeneration of Hydatid Cysts, commenting on the rarity and the clinical importance of this occurrence. Dr. ARCHIBALD GARROD, in two papers on the Changes in the Blood in the course of Rheumatic Attacks, stated that in acute cases the red corpuscles diminished to the extent of about a million per cubic millimetre, the white corpuscles being increased. Dr. WALTER CARR, in a paper on Splenic Anæmia in Children, expressed his belief that the malady was due to a separate cachexia, to which both syphilis and rickets predisposed. Dr. BRISTOWE related some instructive cases of Hepatic Cirrhosis, in which a cure or subsidence of ascites took place, and he insisted on the fact that the efficacy of treatment depended largely on accuracy of diagnosis. The subject of Relapsing Appendicitis received additional attention and many valuable clinical cases were placed on record. Dr. F. J. WETHERED gave his opinion on the Diagnostic and Prognostic Value of Tubercle Bacilli in the Sputum. Dr. LAUDER BRUNTON discussed, from a physician's point of view, the Causation and Treatment of Hæmorrhoids and Allied Affections. Dr. RALFE dealt with the Treatment of Diabetes, dividing the confirmed diabetics into two classes—alimentary and general—and suggesting appropriate therapeutic measures for each. Attention was called by Dr. BURNEY YEO to the frequency with which Cardiac Asthenia followed on Influenza. Many other papers on the complications and sequelæ of this disease were produced. Dr. THIN made an important addition to our knowledge of the symptoms and pathology of Psilosis Linguæ et Intestini. A communication on Renal Dropsy by Dr. DICKINSON elicited the current views of many of the foremost thinkers on this subject. The rarer complications of Rheumatoid Arthritis were dwelt on by Dr. KENT SPENDER, and Mr. HUGH LANE discussed the diagnosis of this affection from rheumatoid arthritis. The benefit following the Arsenical Treatment of a case of Leucocythæmia was set forth in a paper by Mr. DOUGLAS DREW. The treatment of Pernicious Anæmia by Transfusion was advocated by Dr. BRAKENRIDGE and Dr. AFFLECK. Dr. B. W. RICHARDSON gave some interesting and curious details of a new method of Physical Diagnosis by Intra-thoracic Auscultation. An interesting sequel to a case of Tuberculous Peritonitis was placed on record by Mr. LAWFORD KNAGGS. Dr. W. B. HADDEN discussed the Bearings of Syphilis in respect of the Production of Nervous Diseases in Children. Dr. O'CARROLL related the clinical history of four cases of Cerebral Lead Poisoning. Dr. COLLIER pointed out the tendency of young Englishmen to indulge in athletic exercises to an extent likely to prove harmful and to cause Diseases of the Heart and Arteries. A valuable clinical communication on cases of Irregular Heart was furnished by Dr. SANSOM, who held that all forms and degrees of arhythmia were to be ascribed to disturbances of the nervous mechanism of the heart. Dr. FRANCIS HAWKINS gave the results of a careful analysis of seventeen cases of Typhoid Fever associated with Hemiplegia.

The following were some of the Pathological subjects of interest which were brought forward: Mr. MORTON of Clifton directed attention to the subject of Tubercular Ulcer of the Tongue. The condition of the Breast Tissue in cases of Carcinoma was studied by Mr. RAYMOND JOHNSON and Mr. BEADLES, their results emphasising the necessity for complete removal of every vestige of the gland in cancer. Mr. KANTHACK gave a minute description of a case of Madura Foot. Dr. GRIFFITHS exhibited a Dermoid Cyst, probably originally ovarian, which was found attached to the great omentum. A thoughtful paper was read by Mr. SHATTOCK on the Inadequacy of the Current Terms applied to Suppuration and suggesting a new term. Dr. SIMS WOODHEAD introduced a discussion on Phagocytosis and Immunity, which excited much attention and brought out the latest views of many eminent pathological workers. Mr. HOWARD MARSH dealt with the subject of Senile Tuberculosis, and discussed its diagnosis from osteo-arthritis. Nine cases of Congenital Dislocation of the Radius were collected by Mr. F. C. ABBOTT, seven of them occurring in one family. Mr. JACKSON CLARKE showed a litter of five kittens, all of them with Congenital Malformation, and he gave evidence to show that this was due to the mechanical effects of an abdominal tumour in the dam. A specimen of Ileo-colic Intussusception caused by an inverted Meckel's diverticulum was exhibited by Mr. JAMES ADAMS, and another instance of Intussusception associated with Polypus was brought forward by Mr. LOCKWOOD. Dr. F. C. TURNER demonstrated Microscopic Changes in the Brains of Five Fatal Cases of Chorea. A case of Pedunculated Sarcoma of the Cerebellum was brought forward by Dr. M'WEENEY. Dr. ROLLESTON dealt with the subject of Fat Necrosis, regarding it as a trophic lesion resulting from spread of morbid change from the pancreas to the solar plexus. A specimen of Adenoma of the Soft Palate was brought forward by Mr. C. A. MORTON. Mr. W. ANDERSON claimed that he had found, in a specimen of Chronic Mastitis of the Male Breast, the missing link in the pathological analogies of the male and female mammæ. At the last meeting of the Pathological Society a curious specimen of Renal Sarcoma growing down the Ureter was shown by Dr PENROSE, and Mr. JACKSON CLARKE believed that he

had proved to demonstration the causative *rôle* played by psorosperms in the production of squamous epithelioma.

There were some valuable contributions to surgery. Professor WILLIAM ROSE, in his admirable Lettsomian Lectures, dealt fully with the treatment of Trigeminal Neuralgia from a surgical point of view, and illustrated his remarks with accounts of his own operative successes in these cases. Mr. BRUCE CLARKE advocated the Galvano-cautery for the radical cure of Prostatic Obstruction. Mr. BLAND SUTTON put on record a successful case of Trephining for Hæmorrhage from the Middle Meningeal Artery. He also related successfu examples of operative interference in a case of impaction of gall-stones in the common bile-duct and in an instance of splenectomy for wandering spleen. Mr. BOWREMAN JESSETT gave the details of five cases of Gastro-enterostomy, and two of Jejunostomy for Malignant Disease. Mr. MORGAN showed a boy who had sustained a Compound Fracture of the Skull; the comminuted portions of bone were replaced and the patient made a good recovery. A case of Punctured Wound of the Thigh, involving both femoral artery and vein, recorded by Mr. H. ALLINGHAM, led to a discussion as to the proper primary treatment of such a case and the best time to amputate after gangrene supervened. Mr. W. G. MCPHERSON communicated the results of a useful research as to Antiseptic Preparations of Catgut and Silk and their relation to Wound Infection. He found that the most aseptic material sold was the fine undyed silk twist, untreated with any antiseptic material. Mr. GREIG SMITH, in a paper on Enterostomy in Intestinal Obstruction, described a novel method of treatment of the gut, and Mr. F. PAUL gave an account of a case of Enterectomy performed by a method of his own device. Cases of Pylorectomy and Jejunostomy were also brought forward by Mr. MAYO ROBSON, and Mr. A. LANE gave details of a case of Excision of a Cancerous Stricture of the Small Intestine. Mr. BARWELL communicated a paper on the Operative Treatment of Congenital Dislocation of the Hip. A contribution on Nerve Grafting by Mr. DAMER HARRISSON contained a review of the published cases in which this procedure had been carried out. A paper on some further cases illustrating Hepatic Surgery, from the pen of Mr. KNOWSLEY THORNTON, elicited an animated discussion. Mr. ARBUTHNOT LANE recommended a new method of Nephrorrhaphy by splitting the renal capsule posteriorly, twisting the portions stripped up and attaching them to sutures passed through the parietes. He also introduced another way of completely erasing the ankle-joint. Mr. LITTLEWOOD gave particulars of a successful case of Laparotomy for Traumatic Cyst of the Pancreas. Mr. HULKE later related a case of Pancreatic Cyst treated by Exploratory Laparotomy with a fatal result. Mr. GODLEE, in a paper on Ligature of the Left Subclavian Artery for the Cure of an Axillary Aneurysm, dealt with the justifiability of the operation, the best method of performing it and the best material for ligature. Mr. T. W. NUNN read a paper, in continuation of a previous communication, on Cubitus Valgus and Cubitus Varus arising from Fracture at the Elbow-joint. Mr. W. G. SPENCER advocated timely Amputation in Gangrene from Diabetes Mellitus as a means of prolonging life and reducing sugar excretion. Mr. GODLEE later read a paper on this subject, holding that the determining causes were the same in diabetic as in other forms of gangrene. A case of Traumatic Aneurysm of the External Iliac Artery in a boy aged six was contributed by Mr. CLUTTON. Mr. G. R. TURNER related a case of Traumatic Volvulus of the Small Intestine successfully treated by early Abdominal Section. Mr. MEREDITH summarised his experience as to the best way of treating the Peritoneum in Abdominal Surgery. Mr. BLAND SUTTON showed two cases of Amputation of the Arm for Lymphatic Œdema in cases of Cancer of the Breast, in which much comfort to the patient ensued. Mr. HOWSE advocated Amputation through the Thigh, either as a preliminary operation to, or in some cases instead of, amputation through the hip where the hip-joint itself was diseased and the patient in very bad condition. Mr. HULKE gave the details of a case of Hepatic Abscess which burst into the peritoneal sac and which was successfully treated by incision and flushing. Mr. EDMUND OWEN, for the radical treatment of severe Talipes Equino-varus in children, recommended the operation introduced by PHELPS of New York.

In the department of State Medicine and Public Health a thoughtful paper on the Causes of Famine and its relation to Disease was contributed by Sir WILLIAM MOORE. Dr. WILLS of Southwell, in a contribution on Occupation in its Relation to Health, made some sensible observations on the selection of employment for those predisposed to tubercle. Brigade-Surgeon PRINGLE gave his views as to what constituted efficient Vaccination, and Dr. S. M. COPEMAN made some interesting observations on the Bacteriology of Vaccine Lymph. Dr. SISLEY discussed the relation between Influenza in Man and Animals. Mr. C. F. CASSAL referred to the effects of boric acid on health when used as a preservative for food. Dr. COSGRAVE dealt with the subject of the Control of Inebriates. Inspector-General LAWSON read a paper on Cholera in Ships at Sea and their Connexion with Manifestations of the same Disease on Land; and Surgeon-Colonel HAMILTON also introduced a debate on its Epidemic Progression. The Seasonal Prevalence of Enteric Fever in London was the subject of a communication by Dr. LOUIS PARKES. Dr. F. J. PAYNE, in his retiring address at the Epidemiological Society, took as his subject that of Tuberculosis as an Endemic Disease. The "clinical evenings" have been continued by the older societies and adopted by many others. They have been well attended and usually were abundantly supplied with cases for demonstration.

Special Commissions and other Reports.

Sanitary.—In the first issue of THE LANCET of this year we continued our investigation into the ventilation of theatres and other places of public assembly. The great amphitheatre of the new Sorbonne at Paris was selected to illustrate the most recent innovations. We had previously described how at the Vienna Opera House the principle of warming only a portion of the air and then mixing it with pure cold air before its admission had been adopted. At the Sorbonne the purer outside air may be supplied without any sort of warming. The entire wall space of the Sorbonne is previously heated and radiates warmth through the supply of incoming cold fresh air. As the cold air strikes the warm walls it is warmed, becomes lighter, expands and travels upwards. If, on the contrary, according to the old methods warmed air were admitted it would on striking the cold walls lose its heat,

contract, become heavier and fall as a cold draught on the heads of the people below. Our report and accompanying illustration show how these principles are practically applied. Subsequently in a report of the warming and ventilation of private dwellings we described the villa which M. SOMESCO, civil engineer, built for himself at Creil, near Paris, where the same principle is applied. In this case, the outer walls of the house are hollow. The "blanket" of air in the tubular walls is warmed by a furnace in the basement. This heat, passing through the inner wall, radiates across the dwelling-rooms, with the result that, even in cold winter weather, M. SOMESCO'S family sit with their windows wide open, breathing the fresh garden air, and this without suffering from cold or from draughts.

A special report on "Sanitation in the Shop" materially helped to rouse public attention to the abnormal conditions under which shop assistants have to work. The facts brought forward in our report were considered of such importance that our Commissioner was called before the Select Committee of the House of Commons on the Shop Hours Bill and the entire report of THE LANCET was reprinted in the Blue-book on this question. We pointed out the evils likely to result from standing behind a shop counter for fourteen hours a day, from sleeping in crowded attics above the shops and eating hurried meals in basements under the shops, and near unventilated, badly constructed drains. At the same time we showed that it was in the small rather than in the large shops that such evils would be found to prevail.

During the earlier part of the year we described at some length the French Workmen's Sanitary Congress, which was a notable effort of the organised working classes to grapple with the problems of public health in which they are most concerned. In this they received notable assistance from Dr. DUJARDIN-BEAUMETZ, Dr. HENRY NAPIAS, Dr. A. J. MARTIN and other leading sanitary reformers of France. In special articles on sanitation at Calais, and on the Dieppe and Harwich routes, we described the results of our researches as to the improvements effected in passenger communications with the Continent. As travelling abroad for recreation and for health becomes more and more general, this subject is of increasing practical importance. We were also the first to give the full authentic account of the Sanitary Conference held by the different European Powers at Venice and published the text of the protocol there adopted and which now governs the traffic through the Suez Canal, in respect to medical examinations, quarantines &c. During the controversy arising out of the pretended danger of importing cholera through the Suez Canal many complaints were made by foreign critics as to the slow progress of the sanitary measures the English Government is expected to adopt in India. It was therefore gratifying to be able to describe the very satisfactory drainage of the waterlogged town of Rangoon, which has been accomplished, in spite of topographical difficulties. But though the French Government was very anxious to take precautions against cholera at Suez it displayed neglect nearer home. While the cholera epidemic, failing altogether to avail itself of the Suez route, was travelling through Asia towards Russia, another and apparently a separate epidemic had already broken out in the suburbs of Paris. The true nature of this epidemic was revealed by our Special Correspondent. From the commencement of July up to the present date we have published almost every week special articles describing the result of investigations made on the spot. A great many of these articles deal with Paris, the contamination of the Seine water, the measures taken to cope with the epidemic in the French capital and the conflicts between the various local sanitary authorities. The condition of Paris was of the greatest interest, as it was the centre—for a long time the unsuspected centre—from which the western extremity of Europe has been infected. The first case of cholera at Havre, on July 5th, came from Paris; the first cases at Antwerp, on August 15th, came from Havre; and at the same time in another part of Belgium, the first persons to suffer from cholera at Jumet were Belgian workmen who had just returned home from Sarcelles near Paris. Our Special Correspondent consequently went to study these facts on the spot, and reported on the insanitary conditions which favoured the spread of cholera at Jumet, Antwerp, Boom and other places. He also described the sanitary administration of Brussels and the quarantine station of the Scheldt at Doël. Subsequently he visited and examined the drainage, the water-supply, the housing of the poor, the methods of disinfection and other details bearing upon the prevalence of cholera throughout Normandy. We have thus been able to publish very complete accounts of what has occurred at Rouen, Havre, Caen, Trouville, Honfleur and Dieppe. With the aid of maps and diagrams the history of the epidemic in France and Belgium and the sanitary condition of some of the towns visited have been graphically illustrated. By thus carefully noting on the spot the conditions under which the epidemic in some instances developed rapidly, in others slightly and in some cases not at all, we may hope to have brought forward an array of facts that will help to solve the great problems at issue in regard to the prevalence and growth of cholera epidemics.

Analytical.—It is satisfactory to be able to report continued activity in this interesting department, in spite of a temporary suspension of operations which was necessary towards the end of the year in order to provide what has long been wanted—increased laboratory accommodation. The new laboratory, in fact, has only quite recently been finished, and it is now replete with all those modern apparatus, fittings and appliances which the carrying out of carefully conducted and accurate chemical analysis in all its branches now demands. As the improvements that have been effected are considerable we think it would be of interest to our readers to describe them somewhat in detail; and this we propose to do in our next issue, which will be the first number of THE LANCET of 1893. Our attention has again been engaged in the elucidation of the fog and smoke question, and considerable time was spent in the early spring in investigating a stove which was said, not only to consume its own smoke, but also to effect an important economy in the consumption of fuel. Our Analytical Commissioner conducted a series of interesting analyses in Bradford, Yorkshire, where the invention was in working order. Independent examination was subsequently made in THE LANCET Laboratory, and the entire analyses and results were embodied in our Second Report on Perfect Combustion and Smoke-Prevention, in THE LANCET of March 5th. The actual coals used were examined, the products of combustion were

repeatedly analysed and the economical value of the system deduced. Some idea of the scientific work this entailed may be gathered from the fact that no less than fifty-five single analyses were published in the report. It is satisfactory to learn that quite recently this system has been favourably reported on by many leading chemists and engineers, and a large demand has since arisen for its widespread adoption.

We have added to our records another report upon mineral waters, temperance beverages &c., selecting this time as a type of temperance beverage Kop's Ale. This inquiry involved, as a reference to THE LANCET of May 21st will show, thirty-seven single determinations, which were made with the view principally of ascertaining how far the beverage could justly be regarded as of the non-intoxicating order. As a matter of fact it contained a minimum of alcohol, a negligible quantity, ½ per cent. by weight. Being submitted for a short time to a fermentative process it is made more closely to resemble ordinary beer, while as regards hop constituents it is even more strongly charged.

An interesting analysis (made in THE LANCET Laboratory) of the water of Hagar's Well at Mecca appeared in connexion with a paper on the Holy Places of Arabia, by Dr. WORLABET, in THE LANCET of May 14th. A similar analysis had been made in 1883. Referring to the previous sample the following interesting observation is made:—"Our recent analysis indicates that the putrefactive process is still going on, and it follows that the ingress of putrefiable substances into the water has again been permitted."

The next Analytical Commission was instituted to reinvestigate the subject of arsenical wall papers. The report appeared in THE LANCET of July 2nd. From the great number of examinations made we were in a position to state that, owing doubtless to the action of the medical profession in unanimously condemning the practice of employing arsenical colours in wall papers—an action in which THE LANCET took no small part—wall papers loaded with arsenical pigment have apparently become a thing of the past, and those containing any arsenic at all contained an almost imperceptible quantity, while others gave no response to a test which serves to detect the $\frac{1}{10000}$ part of a grain.

In the same number of THE LANCET appeared an article on dangerous diabetic flours, in which two preparations in particular were shown to be absolutely pernicious as diabetic foods, containing over 62 and 66·6 per cent. of starch respectively, although both were advertised as mainly free from starch.

Lastly, under the heading of "Analytical Records from THE LANCET Laboratory," the total number of foods, drugs &c. reported upon amounted to 118, and the number of analyses made, exclusive of special commissions, was no less than 230. We have repeatedly had occasion, it should be remarked, to point out in our columns the unsatisfactory way in which the Food and Drugs Act is being worked in many districts owing to the unaccountable lethargy of the authorities. In several places and in one metropolitan district—St. Martin-in-the-Fields—not a single sample was procured for analysis during the official year. This we have deprecated in strong terms, and now that the Local Government Board have taken the matter in hand it is to be hoped that this state of things will be, as it needs to be, quickly remedied.

Meanwhile we hope to pursue with renewed vigour the work of this all-important department. We are in a better position to do so; the laboratory is now not only situated on THE LANCET premises, but it is fitted with all those appliances and modern improvements by which chemical investigation has been made more accurate and manipulation less laborious.

Hospital Administration.

The past year has not been marked by any changes of importance in the ordinary course of hospital administration beyond those which are regularly in progress, but it has been signalised by the appearance of the last volume of the report issued by the Committee of the House of Lords and the publication of the full results of that inquiry. It is much to be hoped that the inquiry will not fall to the ground, although it must be admitted that the difficulty of the subject dealt with has driven the Committee to make suggestions for the formation of a controlling body of so unusual a character that no surprise need be felt if extreme difficulty should be found in giving effect to them. It would have been comparatively easy to extend the jurisdiction of some existing Government department over these institutions, but this expedient has not been approved, and the Committee has very wisely decided that the less departmental control is brought to bear upon the work of hospitals the better. But the adoption of a principle like this, however sound, tends not to the solution but to the creation of a difficulty and the future must show whether or not the plan approved by the committee has in it the elements of successful work. Apart from the scheme of control the principal recommendation contained in the report is that relating to the foundation of a new hospital for the south of London—a recommendation for which much can be said on the ground of the needs of the district indicated, but which should be adopted only after an inquiry directed more pointedly to the matter in question. It may be admitted that the distribution of hospital accommodation in London, and especially south of the Thames, leaves much to be desired, and yet the proposal to correct this imperfection by the creation of a new institution to compete for the gifts of the charitable should be very jealously scanned and adopted only if in the end it should prove impossible to attain the desired result by any other means. At present therefore more is to be hoped than can be confidently predicated of the Committee's report—the great event, so far as Hospital Administration is concerned, of the past year.

The Benevolent Agencies of the Profession.

Notwithstanding an impression to the contrary, the attainment of success in our profession is not by any means a matter of course, and many are apt to be left at the end of their life's journey with inadequate provision for old age or for those whom they may leave behind them. The societies that are meant to mitigate the results of such a state of matters deserve all the help, and more, that they receive from successful practitioners. A great effort was made at the Biennial Dinner in April under the presidency of the Right Hon. (now Sir) DAVID EVANS, the Lord Mayor, in which we were glad to take our share, to increase the good done by the Medical Benevolent College by raising a sum that would enable the governors to remove the pensioners from the school to live amongst their friends and so to afford addi-

tional facilities in the College for the education of sons of medical men. THE LANCET Relief Fund established to assist members of the profession temporarily in need has been administered, as in former years, by the Presidents respectively of the Medical Council and of the two Royal Colleges in conjunction with ourselves. The Almoners in their report, published in the first number of THE LANCET of the present year, were able to place on record twenty-two cases of relief afforded, in every one of which a pressing and temporary need had been assuaged either by a gift or a timely loan, as the case required. The fourth annual report of the Fund and Forms of Application will be published in our next issue. The Medical Benevolent Fund and the Society for the Relief of Widows and Orphans of Medical Men continue their beneficent work. The latter society has constant occasion to regret that more members of the profession in the postal district of the metropolis do not take advantage of its benefits.

Metropolitan Hospital Sunday Fund.

The Metropolitan Hospital Sunday was held on June 19th, 1892. The sum obtained was less than in the previous year, but the number of contributing congregations is largely increased.

Honours to Medical Men.

The following is a list of the medical honours of the year:—Dr. GEORGE JOHNSON, Dr. FREDERIC BATEMAN, Dr. GEORGE BUCHANAN and Dr. P. C. SMYLY were made Knights. Dr. THORNE THORNE and Fleet-Surgeon MAHON, R.N., were made Companions of the Bath. Professor FLOWER was made a Knight Commander of the Bath. Surgeon-Major-General RICE and Surgeon-Major S. ROBINSON were made Companions of the Star of India. Surgeon-Captain HARE was made Companion of the Distinguished Service Order. Dr. A. OGSTON, Regius Professor of Surgery, was appointed Surgeon-in-Ordinary to the QUEEN in Scotland, and Sir WM. STOKES Surgeon-in-Ordinary to the QUEEN in Ireland. Dr. BROADBENT was appointed Physician-in-Ordinary to the Prince of WALES and Dr. WM. HICKMAN Physician-in-Ordinary to the Duke of EDINBURGH. Sir W. FOSTER, to the satisfaction of the profession, was appointed Parliamentary Secretary of the Local Government Board.

Obituary.

The obituary of the profession seems a very heavy one if we have respect to the many names of distinguished members of the profession which it contains. Many of these indeed died at a ripe age. Dr. JOHN MCDONNELL, F.R.C.S.I., of Dublin, and pupil of the famous RICHARD CARMICHAEL, died at the age of ninety-six. Mr. ROBERT PHILIPSON EDGER, of Hetton-le-Hole, Durham, died aged ninety-four, having taken the Apothecaries' licence in 1823. Dr. GEORGE DIXON LONGSTAFF also died aged ninety-four, having been assistant to the celebrated Professor HOPE of Edinburgh. The lives of some of these long-lived members of the profession would prove worthy of the attention of Sir GEORGE HUMPHRY. Dr. W. F. CUMMING of the clan Cumming and of the Isle of Mull died aged eighty-seven; but it is fifty-six years since he left India and travelled to restore his health. Among many charming qualities and accomplishments he was a great angler. He angled till, from exposure to wet, he became paraplegic. But he went on fishing, having a contrivance for being carried down to the loch, and he still succeeded in catching as many salmon as before. Highly related in Scotch society, he was appointed by the Duke of ARGYLL to be his private secretary in two Governments,—one that of Lord ABERDEEN, the other that of Lord PALMERSTON. But we may not dwell on the great variety of character, service, and history of medical men, as we are tempted to do when once we begin to reflect on the lives whose termination it is our painful duty to record. The following are some of the names which have appeared in our obituary during the year 1892, out of a long list of which we are sorry to omit even one:—Professor JOHN WOOD, Professor BERKELEY HILL, Brigade-Surgeon F. R. WILSON, OSCAR CLAYTON, Sir GEORGE PAGET, ALFRED CARPENTER, Sir MORELL MACKENZIE, Dr. JAMES ROSS of Manchester, GEORGE YEOMAN HEATH, Sir WILLIAM BOWMAN, Dr. HENRY TOMKINS of Leicester, Mr. ESQUIRE DUKES of Canonbury, Dr. TRIPE of Hackney, Dr. D. HAYES AGNEW of Philadelphia, Mr. GEORGE HOGARTH MAKINS, Dr. PHILIP VANDERBYL, Mr. THOMAS COLLEY of Chester, Dr. WILLIAM COLLES (aged eighty-four, son of the celebrated ABRAHAM COLLES), Mr. JAMES PIESSE HARRIS of Liverpool (fifty years in practice), Sir WILLIAM AITKEN, M.D., Mr. FREDERICK LE GROS CLARK, Sir GEORGE MACLEOD, Dr. AITKEN of Inverness, Dr. CONWAY EVANS, Dr. HENRY JOHN TYLDEN, Mr. WALTER PYE of St. Mary's, Dr. KEILLER of Edinburgh, Mr. EDWARD COCK, J.P., F.R.C.S. Eng. (aged eighty-seven), Dr. GEORGE ROSS, Professor of Practical Physic in Montreal, Mr. ROBERT ZACCHEUS PITTS of Chelmsford, Mr. WILLIAM LINDOW DICKINSON of Workington (the first to note trichiniasis during life in this country), Inspector-General D. L. MORGAN, Sir RICHARD OWEN, Dr. WALSHE, Dr. DARBISHIRE, Dr. AVELING, Surgeon-General FASSON (who was superintendent of the Edinburgh Royal Infirmary since his retirement from the Army Medical Service), Inspector-General R. TAYLOR, C.B., and, as we are going to press, Surgeon-Colonel GODWIN, the late Professor of Military Surgery at Netley, and others. We have noticed the extreme longevity of some of the lives of our colleagues. It is sad to note, on the other hand, the death of many young men struck down in the very middle of the battle of life or earlier—sometimes with typhoid fever, perhaps with influenza. The only comfort is that they have died at their posts and that in most instances they have left behind character and work that will be at once the inspiration and the example of their children and of those who survive them.

Conclusion.

We must now conclude our annual summary and may perhaps be permitted in so doing to express to our readers the seasonable wish of "A Happy New Year." We can conceive no profession capable of affording truer happiness than our own. Standard bearers fall, but the great army of healers and helpers remains fighting, not only against disease, but against all those conditions which produce it. Before the Annus Medicus of 1892 can be mastered in all its significance the duties of another year will begin to press on us. It is gratifying to believe, as we firmly do, that disease after disease is coming increasingly under the control of well-directed medical skill and service and that the very failures of the years that are gone are among the conditions of better success in those which are to come. There are still diseases which are the opprobrium of medicine, but not of medicine alone. Medicine has a right to demand the help of society,

of Legislatures, of all men of light and leading. It has been too much the fashion to leave medicine single-handed to cope with disease and the misery which accompanies it. But with more generous help and recognition, medicine will yet appear as a very angel of mercy and as a controlling force over the most appalling diseases.

Annotations.

"Ne quid nimis."

THE QUEEN AND THE HOSPITALS.

IT is no new thing for us to have to note the sympathy which Her Majesty always evinces for the distressed among her subjects. With her gracious sanction a facsimile of the letter which she addressed to the nation in response to the widely expressed and respectful sympathy of her people on the occasion of the lamented death of the Duke of Clarence and Avondale has been largely distributed among the in-patients of hospitals throughout the kingdom. If we may be permitted to paraphrase the highest title which a Sovereign can bear, we make bold to say that that which will spring most readily from the hearts of her English subjects as applicable to Her Majesty, and designating at once her kindly interest and the homage of a grateful people, will be the proud title "Mater patriæ."

OPERATION FOR JACKSONIAN EPILEPSY.

IN the last number of the *International Journal of the Medical Sciences* Dr. Alexander B. Shaw, of St. Louis, records a curious and interesting case, in which operation was undertaken on the brain for the purpose of relieving epileptic attacks beginning in the right arm and sometimes being limited to that limb. The patient was a married woman of thirty-one, the mother of several children. There was nothing in her previous history—either syphilis or injury—to suggest a cause for the fits. The first attack came on in March 1890, without any warning. Its character is not described, but the patient lost consciousness, and remained unconscious for some time. During the next six months the attacks recurred about every two months. They then became more frequent, in spite of treatment, until March, 1891, when she was having an attack about once in every three or four days, the majority being mild and unaccompanied by loss of consciousness, but a certain proportion were more severe and rendered the patient unconscious. During the first few months all the attacks were preceded by a feeling of numbness or pricking, or both, commencing in the right hand and spreading up the arm. This was followed by jerking of the arm, which would sometimes terminate the seizure. Usually, however, forced extension of the toes followed and jerking of the right lower limb. Sometimes the attack went no further; frequently general convulsion succeeded, with unconsciousness and conjugate deviation of the head and eyes to the right. Just before the operation in December, 1891, there was marked weakness on the right side of the body, involving the face, arm and leg, which was greater after a fit. There was also impairment of memory, but no mention is made of any affection of speech, which we should have expected to be present, at least after the seizures. Both visual fields were limited, but apparently optic neuritis was not present. There is said to have been anæmia of the right disc. Trephining was performed over the arm area, and considerable difficulty was experienced in removing the button of bone on account of a considerable thickening of the skull throughout two-thirds of the circumference of the opening. This thickening was greatest over the arm centre in the ascending frontal convolution. The opening was enlarged with forceps and the brain was found to bulge very considerably. After opening the dura mater the cortex was found to be much altered and its consistence was such as to suggest the presence of fluid. None was found on tapping, however, but the surface was irrigated with sterilised water and it then became lighter and more natural in colour. The wound healed well, and since the operation the patient has remained free from pain in the arm and there has been no spasm or convulsion, local or general, and although there is absolute loss of power in the right arm, the facial deformity has disappeared, there is less difficulty in getting about and the patient's memory is better. The result of the operation must be regarded as satisfactory. The further progress will be interesting, especially if it clears up the diagnosis. From the facts ascertained it seems as if the condition of the bone had been the means of altering the cortex and giving rise to the convulsions.

THE LATE SIR RICHARD OWEN.

A PRELIMINARY meeting was held on Wednesday afternoon at the house of Sir James Paget, with the view to the promotion of a memorial to commemorate the late Sir Richard Owen's services to science. It was resolved to form a committee to carry out the object, upon which the following among others have already consented to serve: The Presidents of the Royal Colleges of Physicians and Surgeons and of most of the scientific societies, the Duke of Teck, Lord Playfair, Professor Huxley, Sir Joseph Hooker, Sir Henry Acland, Sir John Evans, Dr. Michael Foster, Mr. Sclater, Sir W. Savory, Mr. Hulke, Sir Joseph Fayrer, Sir Edward Fry, Dr. Günther, Mr. Carruthers and Dr. H. Woodward. Sir William Flower will act as treasurer, and a general meeting will be called at an early date in the rooms of the Royal Society. It was suggested that the memorial should be a marble statue, to be placed in the hall of the Natural History Museum.

THE HEALTH OF ITALY.

THE year closes for the Italian peninsula with an exceptionally clean bill of health and with a no less favourable prospect for the year to come. The President of the Council of State has just received from the Senator, Professor Moleschott, the customary report, setting forth, on the authority of the "Consiglio Superiore di Sanità," the health statistics of the country, with the conclusions to which they lead up. With the one exception of pellagra—a local disease, due to an entirely preventible cause, the consumption of unsound grain—no malady on an epidemic scale has for months been met with in the peninsula; while sporadic ailments themselves appear in reduced number and intensity. To the report thus satisfactorily made by Professor Moleschott confirmation has been given by the "Scuola d'Igiene," which, from a special and independent standpoint, reviews the sanitary state of the kingdom and embodies its judgment in official form. These gratifying announcements become still more acceptable when the causes of the improved health conditions of Italy are taken into account. These are mainly the increased activity of the officers of State hygiene, the wider diffusion of sound sanitary knowledge among the population and the greater efficiency of medical practice in the provinces. Italy is thus seen to be on the right tack and to be already reaping her reward, and not only will the physical and moral well-being of her people be the gainer from this enforcement and observance, public and private, of sound sanitary law, but material advantages will also be hers from the freer, less apprehensive influx of foreign residents into her cities and provinces—a source, as she herself admits, from which about one-third of her yearly income is drawn. From Her Majesty Queen Victoria to the most modest of personally conducted

tourists next season will witness a larger number of visitors to Italy, her winter cities and her "sun-traps," than she has hitherto calculated on, and it will be her own fault if successive seasons do not register a steady advance on their immediate predecessors, till the residence of the invalid or convalescent within her borders becomes as safe and as unvarying a proceeding as that on the French Riviera or even at our own familiar health resorts.

THE PREVALENCE OF SMALL-POX.

IF any change has taken place in the prevalence of small-pox it is in the direction of the widening of the area of distribution. Much anxiety is felt as regards Manchester, for with an increasing amount of small-pox and an increase in the number of districts affected the accommodation available at Monsall is becoming exhausted. This matter was some time since the subject of a carefully compiled report by Dr. Tatham and the occurrence in question may expedite action on the lines which he so ably advocated. The Corporation are, in the meantime, being pressed by the Manchester and Salford Sanitary Association, the members of which have acquired the reputation of supporting every properly devised scheme for the protection of health in the two boroughs concerned. Between 40 and 50 attacks have occurred in Manchester during the present month. In Barnsley the disease is spreading—6 cases were reported last week and removals to the Kendray infectious hospital are increasing; in Halifax a fresh extension has taken place—some 30 patients were in the small-pox hospital and 9 fresh attacks were recorded last week; cases have occurred at Lancaster; a considerable outbreak is reported from West Halton, in the Brigg rural district, Lincolnshire; in Chadderton and Oldham combined there were 20 new cases last week, 11 in Liverpool, 4 in Rotherham, 4 in Southampton, 3 in Derby and minor outbreaks in a number of other places; 6 cases are in hospital in Edinburgh. In the Metropolitan Asylums Board ships 38 cases are under isolation and 7 fresh cases were reported last week.

CHRISTMAS INCIDENTS.

THE oft-repeated saying that in point of weather and in every other way the character of Christmas is changing is true only in a limited sense. Change and evolution must of course rule in this, as in all other times and things, but their processes are never revolutionary. We are not justified, therefore, in speaking even of the present rigorous weather as old-fashioned any more than we can ignore the freshness in maturity which marks the continuance of the season's ancient customs. Merry and bright as usual has been the Christmas of 1892 and we would willingly set our eyes on this aspect of it and look at no other. A sharp and timely frost, which came as if by appointment, has dressed the earth with winter's jewelled robe and has fixed with a wholesome chill the air laden with moisture-bred miasmata. It is true that fog, that spectral oppressor of our cities, has not spared us; nevertheless we have occasionally seen the moon and stars by night and even the metropolis has caught a glimmering half-smile of sunshine by day. This year the ice on ponds and streams has been formed suddenly and with a deceptive appearance of solidity. It has tempted many, the more in consequence of the general holiday, to venture upon it when a very little reflection should have convinced them of its uncertain quality. Already the number of ice accidents is unusually large and these have repeatedly happened in spite of the plainest warnings. We are pleased to learn that at all events the ice on all ornamental waters under the control of the London County Council is being jealously guarded from such misuse until the fact of its bearing is beyond dispute. We need hardly impress upon every local authority, public or private, the wisdom and the duty of exercising a like restraint upon the rashness of careless and inexperienced persons, as well as of maintaining for use in case of need the ordinary rescue and restorative appliances. There is no possibility of forgetting that the great winter festival has a social side. It is the common meeting point of every class. Its appeals to each are based upon the same sanctions of faith and of human kinship. Its usages, likewise, however they may be modified by circumstances, whether affluent or straitened, partake of the same essential characteristics. In the practice of these the rich and the poor meet together, and it is not, in our opinion, a subject of regret that even the poorest may enjoy some remembrance of his neighbour's charity. We are not indeed of those who would pamper with superfluous delicacies and expensive efforts at entertaining the inmates of workhouses, hospitals and the like institutions. There is too great a tendency perhaps to this kind of practice in our days. Nevertheless it must be admitted that all are the better for recognising in some substantial way the claims of poverty to participate in the universal enjoyment, and it were false economy to deny the occupants of hospital or workhouse an extra ounce of tobacco or of tea when their wealthier neighbours have enough and to spare. Excess of a somewhat serious character is unfortunately so far a constant circumstance in Christmas-keeping, and the case of a man recently found frozen to death while apparently lying in a drunken sleep is not by any means unique. The habit of "treating" with drink is happily falling more and more into disuse and its general discontinuance will cause no regret to any person who thoughtfully considers the matter. The incident just mentioned, however, may be remembered by the police and others as proving that even the drunken at this season may require, even if undeserving, some further care besides mere incarceration.

THE ALTHORP MURDER.

ON Dec. 24th at the Northampton Assizes Andrew McRae, a married man, was found guilty of having murdered a single woman named Annie Pritchard on July 20th last. The case is remarkable, firstly, from the ghastly circumstances surrounding the crime and, secondly, that the three essential facts to be established to validate a conviction—viz. (1) identification of the remains, (2) the proof of violent death and (3) the fixing the murder upon the accused—were all contested by counsel for the defence. It will be remembered that the greater part of the body of an adult female was found in a sack at East Haddon by the side of the railway. The woman Pritchard was proved to have been on terms of intimacy with McRae and it was also known that she had been delivered of a child. Some portions of incinerated bones were found in the fireplace at the warehouse where McRae was employed, and these, in the opinion of Mr. Milligan, belonged to a human being. In this he was supported by Mr. T. Bond, with the reservation that they bore a great resemblance to the phalanges of apes. There can be little doubt that the remains found at East Haddon were those of Pritchard, since some of the clothing was identified as having belonged to her. Further, McRae about the time of the disappearance of Pritchard purchased some lime. Another link in the chain of evidence consisted in the fact that the sack in which the remains were found bore a mark similar to others used in the warehouse before referred to. Again there was nothing but a suggestion to the effect that Pritchard was still alive. Moreover, McRae was proved to have occupied rooms with a woman corresponding to the description of Pritchard; in fact, the prisoner's counsel admitted they were known to each other, but contended that McRae had only given the woman shelter. It was further contended that there was no evidence that the person whose body was found at East Haddon had not died a natural death. The theories put

forward by McRae's counsel, although plausible, signally failed to cover the facts which had transpired and the jury had no alternative but to convict McRae. Mr. Justice Kennedy passed sentence of death.

HINDOO OCULISTS IN LONDON.

AT the Marylebone Police Court, on the 21st inst., three Hindoo gentlemen—Molla Bux, Nabre Bux and Shah Deen—of 39, Camden-road, appeared, charged with pretending to be doctors of medicine or physicians. They practised as Indian oculists and distributed handbills in which Molla Bux was designated "Dr." Mr. W. T. B. Woods prosecuted on behalf of the London and Counties Medical Protection Society. The theory of the defence was that Molla Bux was an Indian oculist, that Nabre was his assistant and Deen his clerk, but the prosecution alleged that occasionally the two latter would lead persons to believe that they were "Dr. Molla Bux." Mr. Warburton adopted a bold line of defence. He admitted the facts and maintained that they amounted to no violation of the law. A certificate in Hindustani was put in and translated to the following effect: "Dr. Molla Bux was practising for diseases of the eye and had given satisfaction to persons in the locality." This qualified him to practice in India. It seems a slight basis for a similar claim in England. But on his agreeing to use the word "Mr." Molla Bux instead of "Dr." and to avoid all pretension to being "registered," the summonses were dismissed.

THE SCHOOL BOARD AND THE VESTRIES.

THE important inquiry before Mr. Horace Smith at Clerkenwell Police-court on the sanitary state of the Yerbury Schools, where sixty-six of the scholars are said to have had diphtheria this year, was again adjourned. At the second sitting Mr. Harris, medical officer of health, was further examined, and described the tests he had applied to the drains and the soil—"made" soil—in which they were laid with joints left open, permitting leakage of sewage-water into the ground and foul air, gases, and emanations to make their way under the school premises and up through the thin and porous asphalte of the playground. His evidence was confirmed by that of Mr. James Patten Barber, surveyor to the Islington Vestry, by Professor Corfield, and by Mr. de Courcy, surveyor to the Hornsey Local Board. The magistrate undertook, at the request of the counsel for the board, to see the drains. The board maintains that the drains are no worse than others laid fifteen years ago. It is obvious that the Vestry of Islington is only doing its duty in having the real state of the drains thoroughly investigated. It would, perhaps, have been well if the medical officers of the respective authorities could have agreed without such an inquiry; but failing this it must have a good effect on the public and on responsible bodies to set all facts in the open light of a court of law. We have still to hear the evidence of the "other side."

MISMANAGEMENT OF MORTUARIES.

THERE are some honorary offices which men will strive after, and the duties of which they will undertake and discharge with readiness and perseverance; there are others which they accept because a public necessity is laid upon them and of which they will be quit at the earliest opportunity. As regards the great majority of mankind, it may be truly said that the functions of jury service belong to this latter class. Any pretext of business or of health is eagerly grasped at as a straw which may bear up one who is threatened with this fate. What is true of the juryman in an ordinary law case is probably true in a sensibly greater degree of one who has to use his judgment in aid of a coroner's decision. Obviously therefore it is at least highly impolitic to add by any avoidable annoyance to this never very palatable service. Such an absence of ordinary care and we may say of ordinary civility as was apparent at a recent inquest in the Camberwell district was by no means calculated to improve the temper either of the coroner or his assessors. In this case it was impossible to view the body till the mortuary door, which was found to be locked, had been opened. In order to effect this object the St. Saviour's Board of Works had to be applied to, the jury going in procession for the key. It was noted also that though post-mortem examinations were conducted here, not even a piece of soap was provided for the use of those who performed them. This neglect of ordinary measures of cleanliness in connexion with inquest arrangements is not unknown in other parishes besides Camberwell. One want in particular is common and it is one which will be cruelly felt at the present time—namely, hot water. We need not remind our readers of the paramount importance of cleanliness in medical practice. The matter has been mentioned times without number in our columns and we must again protest against the unfairness of subjecting medical men and others to such annoyances as these, which might be most easily remedied, but which are still from sheer neglect suffered to remain as they now are—the causes of serious inconvenience, and even of injury, to the public health. There should be no difficulty in providing a coroner's officer with a key for any mortuary, or in making such provision as is absolutely needful for the wants of practitioners whose duties take them thither.

DEATH OF SURGEON-COLONEL C. H. Y. GODWIN, A.M.S.

IT is with sincere regret that we record the death of Surgeon-Colonel C. H. Y. Godwin, whose decease will be widely deplored throughout the Army Medical Staff, where his eminent scientific attainments were highly appreciated. The news reached this country by telegram on Saturday last, he having died on the previous day, the 23rd inst., at Rawal Pindi, where he was principal medical officer of the division. He had only been in India three months when he was attacked with acute dysentery, which proved fatal in less than a fortnight. The circumstances under which he went to India will be fresh in the minds of our readers. On the resignation by Sir Thomas Longmore of the chair of military surgery at the Army Medical School, Netley, Brigade-Surgeon-Lieutenant-Colonel Godwin, who had acted in the capacity of assistant professor, succeeded Sir Thomas Longmore as professor. He had not long occupied that position when he was promoted to the rank of surgeon-colonel, but in consequence of some difficulty with the Treasury authorities regarding his pay, he was obliged to resign his chair of surgery. Thereupon he was ordered to India, and he had not been two months in that country when he was attacked, as we have said, with acute dysentery, which proved fatal in less than a fortnight.

SOME EFFECTS OF WOUNDS OF THE HEART.

SCIENCE, notwithstanding its usually strict obedience to law, surprises the observer of its processes not infrequently with some curious departure from its regular methods. To the by-law which decrees this occasional variation the science of pathology conforms and by many apparent freaks of diverse causation varies the processes by which disease more usually reveals itself. One such was the subject of an inquest at the Lambeth coroner's court a few days ago. The deceased, a female school teacher, died of pericarditis, and this condition was found on examination to be due to the presence of a needle which had penetrated the cardiac apex. The motive of course was suicide and the chosen method surely was a painful one enough. A very similar case was related at a meeting of the Royal Academy of Medicine in Ireland by Mr. William Thomson (THE LANCET, March 24th

1888). In this instance the sufferer was a lunatic and the cause of his fatal illness a pin which had been pushed up to its head in the fifth left intercostal space. It is hardly needful to observe that death in such cases does not occur suddenly, but what is more noteworthy is the fact that even where a considerable wound, such as that of a knife-stab, has been inflicted in the heart, the vital functions of that organ may continue for some time afterwards. A note in THE LANCET of Dec. 15th, 1888, bears upon this subject; and a still more striking illustration of the same fact is recorded in the Transactions of the Æsculapian Society for 1884. This latter example is further interesting as an instance of traumatic mitral murmur. The relatively late occurrence of death in such cases has an evident connexion with the obliquity and the size of the wound inflicted, or, in other words, with the suddenness and amount of the resulting hæmorrhage.

"A FILTHY AND POISONOUS RITE."

A FORTNIGHT since we drew attention to the unbiased testimony of a Roman Catholic priest to the efficacy of vaccination based on his personal powers of observation exercised in the performance of his self-sacrificing and Christian duty. To-day—in strange contrast with that experience—we are confronted with the *ex cathedrâ* utterance of a member of another profession, one from whom we might expect a judicial estimate of the subject. To be sure this gentleman has not—like the good priest—himself come into contact with small-pox patients; he has not seen the ravages it creates among the unvaccinated and the vast amount of suffering and death it inflicts upon unprotected children. His strong remarks are purely based on *a priori* considerations, on violent mistrust of the medical profession, as well as on the ground of interference with the liberty of the subject. He talks of the "medical despotism" which imposes the "filthy and poisonous rite" of vaccination upon a subservient nation, and he informs the world that "some of the noblest" of our ranks are on the side of anti-vaccination. It is perhaps mere waste of time and energy to meet this effusion in the way it deserves, but we would ask Mr. Hopwood, Recorder of Liverpool, one plain question. Does he believe that the medical profession advocate vaccination and re-vaccination in their own interests or in those of the community whom they serve? There can only be one answer to that question, but it is not the one which fits in with the terms of the letter which has led to these remarks.

ACTINOMYCOSIS OF THE SPINE.

WITHIN the last two or three years a large number of cases of actinomycosis have been placed on record. The spinal column, as the seat of the primary disease, however, is very rare, and the following case, recorded in the *Münchener Medicinische Wochenschrift*, No. 25, 1892, is worthy of notice. The patient was a girl aged sixteen. For a long time the diagnosis remained uncertain, for from the family's clinical history tuberculosis was suspected. The primary symptoms pointed to the spine or posterior portions of the ribs as the seat of disease. It was considered probable that the spine was first attacked and that the morbid process then spread to the ribs and pleura, producing an acute and extensive pleuritis on the left side with a large amount of effusion. The inflammation then extended further up the spine and the pus penetrated between the intercostal muscles and the costal pleura, at first slowly and then more rapidly. At the same time the left lung was gradually invaded. The lung tissue then commenced to break down and a small abscess formed which finally burst into the bronchi. An examination of the sputum about this time cleared up the diagnosis, for the "ray fungus" was found and thus once more proved the value of such an examination in cases where the diagnosis is doubtful. Now that the examination of expectorated matters and discharges from the chest is becoming more systematic cases of this kind will probably become much more numerous. To return to the account of this case: The pus extending on the left side finally penetrated the pericardium, leading to a sharp attack of pericarditis, followed by death. Although careful search was made no metastatic deposits were found in the other organs of the body.

EPIDEMIC INFLUENZA.

TOGETHER with the news as to a recurrence of epidemic influenza in Southern Russia and notably in Kieff, Odessa, Kherson and Nicolaieff, and with the announcement of attacks further north, as in Moscow, we are having unmistakable signs that we still have to do with the disease in this country for another winter. In Sheffield a number of people have been attacked, isolated occurrences are reported from other places, and the metropolis is by no means free. We may hope that this is the last manifestation of an epidemic which is on the wane before its final disappearance. It is highly improbable, however, that it will attain to anything like the dimensions of its previous outbreaks.

A WORKSHOP IN ST. JAMES'S.

THE St. James's Vestry had resolved to make a sudden visit to a tailor's cellar workshop. This place was represented as being twelve feet below the pavement, with a window looking out on to the area, which, however, is said to be so hemmed in that it was almost impossible to see the sky. The room was triangular and contained a number of gas-jets and a stove for heating the tailors' irons. It is supposed to be overcrowded and badly ventilated. The curious part of this matter is the energy with which a vestryman complained against the entrance of the sanitary inspector in this workshop; and when the vestry decided to go there themselves to verify the statements made, he wished to give the shopkeeper timely warning. Much yet remains to be done before the Amended Factory Act will be thoroughly applied and its principles realised. In the West-end generally, as well as in the sweaters' dens of Whitechapel, there are numerous workshops where the worst conditions prevail and where the health of the workers is gravely compromised. Our investigations in respect to sweating among tailors showed that even in some of the best workshops where there is no sweating and very good wages are paid there is often no ventilation, insufficient light and overcrowding. We are glad to see that the majority, in any case, of the St. James's vestry are quite disposed to take measures to put an end to such grievances.

MUSCULAR ATROPHY AND HEMIPLEGIA.

MESSRS. JAFFRAY AND ACHARD, in the *Archives de Médecine Expérimentale et d'Anatomie Pathologique*, have contributed some observations and made an attempt to reconcile the different theories which have been held with reference to the occurrence of atrophy after hemiplegia. This condition, according to Charcot and Leyden and their followers, is a result of an affection of the anterior horns in the spinal cord. Dejérine, on the other hand, ascribes the condition to an affection of the peripheral nerves; while Quincke, Eisenlohr, Babinski and others hold that there is no discoverable anatomical condition underlying the change, but that it is the result of a functional disturbance in the cells. In two cases examined by Messrs. Jaffray and Achard changes were found in the anterior horn cells, so far confirming Charcot's views. To explain the different conditions and reconcile the different theories, they suppose that in the first place, on account of the lesion of the pyramidal tracts, there is stimulation of the cells of the anterior horns, giving rise to contracture. If this stimulation is succeeded by exhaustion then

atrophy results, but in this there are several stages. At first there is simple muscular atrophy, the nerves not yet being appreciably altered, and the anterior horns and intramuscular endings being anatomically intact. But later degeneration in the motor nerves sets in, and in the peripheral nerve endings; and last of all, the cells in the anterior horns undergo visible atrophy.

ISOLATION ARRANGEMENTS FOR LEITH.

THE authorities of Leith are contemplating the erection of a new hospital for infectious diseases, and with this object in view a deputation, consisting of the provost, a number of councillors, with the burgh architect and Dr. Gray, the health officer, have recently conferred with Dr. Thorne Thorne and Mr. Power at the Local Government Board offices. They decided to visit one of the Metropolitan Asylums Board Hospitals, the hospital belonging to Leamington and Warwick and the one at Walker erected by the Corporation of Newcastle-upon-Tyne on their return journey.

ON the 22nd inst. certain changes took place at the Coombe Lying-in Hospital, Dublin, by which Dr. S. R. Mason, late master of the hospital, was appointed consulting surgeon, and Mr. P. P. Barry, L.R.C.P.I., L.R.C.S.I., late assistant to the master, was appointed deputy-master.

A MEMORIAL TABLET has recently been unveiled in the portico of the Ducal Palace at Mantua in honour of Dr. Achille Sacchi, whose romantic career as Garibaldian surgeon in Italy's wars of independence, followed by many years of philanthropic activity as practitioner and as citizen among the poor of the Venetian territory, has already been narrated in THE LANCET (April 12th, 1890).

MR. H. N. MILTON, medical officer of the Kasr-el-Aini Hospital at Cairo, some time since obtained a verdict against the French journal, *Le Bosphore Egyptien* on account of a violent article which it contained making certain allegations against English practitioners in Egypt. The judgment in the first instance awarded £1000 damages, but on appeal the amount was reduced to £80.

AT a meeting of the Governors of St. Mungo's College, Glasgow, held on Thursday, Dec. 22nd, Mr. Robert Thomas Kent, M.A., F.R.C.S., was appointed Professor of Anatomy in room of Mr. Henry E. Clark, M.R.C.S., who had been appointed Professor of Systematic Surgery, and Dr. Robert Fullarton was elected Lecturer on Diseases of the Throat and Nose, vice Dr. David Newman, resigned.

WE have to announce with regret the death of Inspector-General J. R. Taylor, C.B., F.R.C.S.Eng., of the Army Medical Department, and Honorary Surgeon to the Queen, at the age of eighty-two. This officer joined the medical service nearly sixty years ago, in May, 1833, and retired in 1863. He had seen much active service in the Crimea and elsewhere and was in receipt of a distinguished service reward.

THE post of medical superintendent of the new London County Asylum at Claybury has been filled by the appointment of Robert Jones, M.D. Lond., B.S., F.R.C.S.Eng. &c. lately superintendent and resident physician of Earlswood Asylum. The contributions of Dr. Jones to alienist literature have been both numerous and important, whilst his official work in connexion with the asylums at Colney Hatch and Earlswood, and as an adviser on the best methods of asylum construction, mark him out as eminently fitted for the important post to which he has been elected.

MR. WALTER A. PRICE, aged twenty-four, a fourth year's student of the Bristol Royal Infirmary, was taken ill, while on duty as dresser for the week, on Dec. 8th with lymphangitis of the arm and after a few days developed cellulitis and died in that institution on the morning of Dec. 15th. A memorial service was held in the infirmary chapel on Saturday, Dec. 17th, which was attended by the members of the honorary staff, the resident medical officers and a large number of nurses, students and patients.

THE *London Gazette* of Tuesday last publishes an important notice calling attention to the clause in the Factory and Workshop Acts by which the Home Secretary is empowered to certify that in his opinion certain processes in the manufacture of earthenware explosives in which di-nitro-benzole is used and in conducting chemical works and quarries are dangerous or injurious to health. To carry out this provision the chief inspector may serve on the occupier of the factory or workshop a notice in writing, either proposing such special rules or requiring the adoption of such measures as may appear to the inspector to be efficient and practicable.

THE history of the healing art will shortly be enriched with an important contribution from the pen of the Senator Antonio de Martini, Professor of Medicine in the University of Naples. Dr. De Martini's subject is the Discovery of the Circulation of the Blood, and the proofs he has already given of proficiency in the historical aspects of medicine, coupled with his long association with an acknowledged master in those studies—Dr. de Renzis, the editor and translator of Celsus and historian of the Salernitan school—afford ample grounds for expecting from him an able and independent review of one of the greatest, while also the most gradual, of all discoveries in biology.

M. PASTEUR'S JUBILEE.

(FROM OUR SPECIAL CORRESPONDENT.)

THE seventieth anniversary of the birth of the illustrious *savant*, Louis Pasteur, was celebrated on Dec. 27th, in a style worthy of the great occasion. From the early hour of 9.30 A.M. streams of admirers began to pour into the large amphitheatre of the Sorbonne, the headquarters of the University of France having been aptly chosen as the scene of the ceremony, which no one present is ever likely to forget. The floor of the amphitheatre was reserved for deputations, both native and foreign, and for personages attending in an official capacity. The public filled the rest of the places, one of the "tribunes" being occupied by the band of the Garde Républicaine, another in the centre by Madame Carnot and one to the left by Madame Pasteur and members of her family. At 10.30 A.M. M. Pasteur entered, leaning on the arm of M. Carnot, the chief of the State. M. Pasteur wore evening dress, the sombreness of the costume being relieved by the addition of the scarf of the Grand Cross of the Legion of Honour. When the applause that greeted their entry had subsided, M. Carnot took the chair, while M. Pasteur seated himself at the far end of the first row of *fauteuils* by the side of his son, M. Jean Baptiste Pasteur, and behind a table destined to bear the weight of the piles of addresses and gifts sent from all parts of the world. To the right of the President were noticed MM. d'Abbadie, President of the Académie des Sciences; Le Royer, President of the Senate; Ribot, President of the Council; together with the Corps Diplomatique, our own Ambassador, the Marquis of Dufferin and Ava, being of the number. On M. Carnot's left were MM. Joseph Bertrand, Permanent Secretary of the Académie des Sciences; Floquet, President of the Chamber of Deputies; Dupuy, Minister of Public Instruction; and the rest of the Ministry *au grand complet*. Behind this first row the platform was occupied by deputations of the five divisions composing the Institute, of several foreign

societies, of the Académie de Médecine, and by M. Gréard, Vice-Rector of the Académie de Paris, the Deans of Faculties, the Presidents of the Cour de Cassation, Cour d'Appel and Conseil d'État, the Procureur-Général, the Prefects of the Seine and of Police, the President of the Municipal Council, the Director of the Assistance Publique &c. The semicircle of seats on the floor of the theatre was filled by deputations of the Association Générale des Étudiants (several members of which acted as ushers), the École Normale Supérieure, the École Polytechnique, a great number of French and foreign universities and societies, *internes* of Paris hospitals and members of the Institut. The first speaker was the Minister of Public Instruction, who, addressing first the President, characterised the gathering thus honoured by his (M. Carnot's) presence as "la fête de la France et de l'humanité," seeing that at that moment the thoughts of the entire scientific world and of thinking humanity were centred on what was passing at the old Sorbonne. Addressing, then, M. Pasteur as "cher et illustré maitre," he said that, although his life-work could only be analysed by the scientific, the ignorant and the learned alike knew that he had accomplished *quelque chose de grand;* the most profane amongst us could not remain insensible to the results of his labours—labours conducted with so much patience and tenacity as to command the admiration of the world. All his success was due to his unswerving faith in science—"foi d'apôtre," as the orator termed it. Had he devoted his energies to pure science the topmost place would have been his. Happily for himself and for humanity he deserted that path and henceforth passed his days in inventing antidotes for diseases that had for centuries decimated both the animal and human populations. M. Dupuy here quoted Renan, who, addressing M. Pasteur on the occasion of his (Pasteur's) reception at the Académie Française, said: "Votre vie scientifique est comme une traînée lumineuse dans la grande nuit de l'infiniment petit, dans ces derniers abimes de l'être où nait la vie." Agricultural France was fully aware of the debt of gratitude owing to him for his great discoveries made since the year 1860 on the principles of fermentation and their application to wine making, the manufacture of vinegar and brewing. Ever marching onward, he had aspired to the solution of such mysteries as the cause of diseases affecting the lower animals. Having given to farmers a vaccine for anthrax and swine typhoid, he had achieved the same success with hydrophobia. Henceforth, thanks to him, the following formula may be unhesitatingly accepted as true: "Ferments and viruses are living beings, vaccines are attenuated viruses and the basis of medicine is the artificial attenuation of viruses." In a magnificent peroration the Minister wound up his discourse by saluting M. Pasteur—that *merveille de la science et miracle du génie*—in the name of France and of humanity.

M. d'Abbadie, President of the Académie des Sciences, then congratulated M. Pasteur on behalf of the Institute and presented him with a splendid gold medal, the product of an international subscription. The medal, the work of M. Rotz, of the Académie des Beaux-Arts, bears on one side the effigy of M. Pasteur and on the other the following inscription: "À Pasteur, le jour de ses soixante-dix ans, la science et l'humanité reconnaissantes.—27 décembre, 1892." With the medal there was also presented a list of subscribers' names. Speeches by MM. Joseph Bertrand and Daubrée, of the Institute, were also delivered.

Sir Joseph Lister gave expression to the feelings of gratitude which animated the breasts of all practitioners of the healing art, and handed M. Pasteur a letter sent by the President of the Royal Society. Sir Joseph Lister said that he had the great honour of laying before him the homage of medicine and surgery. To no other man were the medical sciences so indebted as to M. Pasteur. His researches on fermentation had shed such a light on surgery as to transform the treatment of wounds from the too frequently disastrous empiricism which formerly obtained into a successful scientific method. Thanks to M. Pasteur, surgery had undergone a complete revolution, which had deprived it of its terrors and widened almost to an unlimited extent its usefulness. Nor was medicine less indebted to his profound and philosophical studies, which have lifted the veil which had covered for ages infectious diseases. M. Pasteur discovered and demonstrated their microbian origin. Thanks to his own special labours and to that of his pupils, the causation of quite a number of maladies is now revealed—

Felix qui potuit rerum cognoscere causas.

This knowledge has already facilitated to a remarkable extent the diagnosis of these plagues of humanity and indicated the path to follow for their prophylactic and curative treatment. Along that path his grand discovery of the attenuation and intensifying of viruses would ever remain as a guiding star. As a striking example, Sir Joseph Lister mentioned Pasteur's researches on hydrophobia. With the exception of a few ignorant people, everyone appreciates the greatness of the results obtained by the application of his original method against this disease. M. Pasteur had furnished us with a means of diagnosis which unerringly dissipated all the horrible doubts which formerly haunted persons bitten by a healthy dog suspected to be rabid. Had he achieved no other triumph, this diagnostic one alone would entitle him to the eternal gratitude of mankind. But he had gone further, and by his marvellous antirabic inoculations he had been enabled to pursue the poison after its entrance into the system and vanquish it there. In conclusion, Sir Joseph Lister reminded M. Pasteur that of the diseases to which human beings were subject, those of an infectious nature were by far the most common. It was therefore only fitting that the medical and surgical branches of the profession should on that solemn occasion offer him their tribute of respect, admiration and profound gratitude.

Other speeches followed by M. Bergeron, on behalf of the Académie de Médecine, and M. Santon, President of the Paris Municipal Council. Then followed the presentation to M. Pasteur of addresses brought by delegates of various French and foreign societies. The names were called in alphabetical order, the foreign list being as follows:—Medical Society of Amsterdam, University of Athens, University of Barcelona, Medical Societies of Berlin, Berne, Brussels and Christiania, Health Association of Cologne, Academy of Sciences of Copenhagen (this latter sent a gold medal), Royal University of Ireland and Royal Academy of Medicine of Dublin, Faculties of Medicine of Gaud and Geneva, Universities of Genoa, Lausanne, Liège, Association for the Advancement of Medicine of London, Medical Society of Lund, Institute of Medicine and Association of Sciences of St. Petersburg, Naturalists' Societies of Little Russia, Universities of Posen and Stockholm, Academy of Medicine of Turin, University of Utrecht and Medical Society of Warsaw. Besides these bodies, French ones were, as may be imagined, well to the fore in their congratulations. M. Ruffier, the Mayor of Dôle, M. Pasteur's native town, then delivered an address and offered to his distinguished fellow townsman an album containing an exact facsimile of the certificate of birth and the photograph of the house where he was born on Dec. 27th, 1822.

During this long series of presentations M. Pasteur was greatly moved, tears rolling down his cheeks on several occasions. So moved was he by the warmth of his reception that on rising to speak he could only utter a few broken sentences. The rest of his speech was read by his son. The presence of the President of the Republic, he said, transformed a *fête intime* into a *grande fête*, and thus the simple birthday of a *savant* became an epoch for French science. But in this joyful hour his thoughts involuntarily strayed to the hard struggles of searchers after truth, whose ideas had been stifled by the prejudice against which they had had to struggle. Not many years ago a man he had so loved and admired—Claude Bernard—had for a laboratory in the neighbouring Collége de France no more appropriate place than a low damp cellar. May he not have there contracted the disease which killed him? He could not refrain from contrasting the splendour of this reception with the above *souvenir* of his dead friend. "Je salve cette grande mémoire." It seemed that by a delicate attention his friends had tried to recall before his eyes the panorama of his life. The Mayor of Dôle brought him the photograph of the very humble house where his father and mother lived and struggled for existence. The presence of the pupils of the École Normale reminded him of the dawn of his enthusiasm for scientific research, as did that of the representatives of the Lille Faculty of his first studies in crystallography and fermentation—studies which revealed to him quite a new world. All his hearers knew how he had been led to pursue physiological investigations. If he had from time to time disturbed the calm usually reigning in the Académies by somewhat lively discussions, he did so because he was upholding the truth. Addressing the foreign section of his audience, M. Pasteur said: "You delegates of foreign nations who have journeyed so far to give a proof of your sympathy for France, you bring me the greatest joy a man can feel who believes that science and peace will triumph over

ignorance and warfare, that nations will end by understanding each other to their mutual edification, and that the future will belong to those who shall have done the most for suffering humanity. For the truth of this I appeal to you, my dear Lister, and to you all, illustrious representatives of science, medicine and surgery." Addressing his younger auditors, he said: "Young men, young men! trust to these sure, powerful methods only the primary secrets of which we are yet acquainted with; and whatever your path in life may be, keep clear of sterile and slanderous scepticism. Do not be discouraged by the sadness of certain epochs which it is the lot of every nation to pass through. Live in the serene peacefulness of laboratories and libraries. Ask yourselves, 'What have I done to educate myself?' Then, after having made some progress, ask yourselves the further question, 'What have I done for my country?' The time will then perhaps come when you may enjoy the immense delight of contemplating the benefits you have shed on progress and the good of humanity by having contributed to their progress. But let your efforts be successful or not, you should be in a position to say, 'I have done my best.'" I reproduce the closing sentence of M. Pasteur's discourse:—"Messieurs, je vous exprime ma profonde émotion et ma vive reconnaissance. De même que sur le revers de cette médaille, Roty, le grand artiste, a caché sous des roses la date si lourde qui pèse sur ma vie, de même vous avez voulu, mes chers confrères, donner à ma vieillesse le spectacle qui pouvait la réjouir davantage, celui de cette jeunesse si vivante et si aimante." The English delegates present were: Drs. Sidney Martin, Sims Woodhead, Cartwright-Wood, Armand Ruffer, Professor Burdon-Sanderson, Sir J. Paget, Sir T. Spencer Wells, Sir Joseph Lister and Sir Henry Roscoe.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

THE continued appearance of cases of cholera over such a wide area in Russia, Poland, Germany and France sufficiently indicates the extent of distribution of the disease and naturally gives rise to disquieting apprehensions as to the probability of its still further extension and manifestation in epidemic force during next year. The cold weather—and it appears to have been extremely cold of late in Northern Europe and on the Continent generally—has no doubt greatly checked, but it has not destroyed, the disease.

The official statistics recently published at Berlin show that 8510 persons have died of cholera in Germany during the epidemic. In the city and State of Hamburg, where it prevailed most severely, the deaths were 7614, equal to about 1·22 per cent. of the population. The number of deaths in Prussia was 892, of which 502 occurred in the Government district of Schleswig, 116 in Lüneburg, 90 in Stade, 66 in Stettin, 42 in Potsdam, 16 in Magdeburg and 15 within the precincts of Berlin. The disease prevailed also in other German States to a relatively small extent. Mecklenburg-Schwerin, for example, which appears to have suffered most, had 43 deaths and the remaining States had a cholera mortality varying from 12 to 1 only. The statistics show that the epidemic attacked the districts near Hamburg most severely and spread up the river with diminishing force. Altona, in immediate proximity to Hamburg, had 328 deaths. The parts of the districts of Stade and Lüneburg, which lie on the left bank of the Elbe, also suffered severely for some time during the Hamburg epidemic. The town and subdistrict of Harburg had 102 deaths, 61 of which occurred at Wilhelmsburg, which has 8666 inhabitants. During the past week there have been almost daily several fresh cases of cholera at Hamburg. On the 27th inst. 4 fresh cases and 2 deaths were reported, and there were in addition 7 persons suffering from suspected cholera. There were a severe frost and dense fog at Hamburg on that date. Two fresh cases and one death from cholera were reported on the 28th.

From St. Petersburg we learn that cholera continued to prevail in the Vassili Ostroff quarter of that city and the disease is stated to have been very prevalent along the Caucasian shore. The Black Sea ports are officially reported to be free from cholera. According to a telegram from St. Petersburg on the 25th inst. no fresh cases of cholera had been registered there during the past two days. The cold was intense, the thermometer registering 30° F. below zero. A large medical congress had assembled in that city to consider what means should be adopted in the event of the reappearance of epidemic cholera in the spring and summer of 1893. There were 250 Russian doctors present at the preliminary meeting on the 25th inst., under the presidency of the Director of the Medical Department of the Minister of the Interior. In the south-western provinces of Russian Poland the disease was still prevailing severely according to telegraphic intelligence from Cracow.

There has been no further information as to the continued prevalence of cholera at Budapest. As regards France several cases of the disease have been recorded at Dunkirk—four cases and two deaths were reported as late as the 27th inst. Madame Joséphine Graffin, known as Sister Véronique, died last week from cholera at the Calais Hospital, where she had devoted herself to the nursing of cholera patients. Sister Véronique had only been in Calais one month, having come from Chartres. This death has caused some sensation and a public funeral attended by all the municipal authorities was given her. One of the male cholera patients in the hospital also died on the same day. At Paris there has been one death from cholera on Dec. 11th, 13th and 17th respectively, and a woman from the suburb of Noyent-sur-Marne died in a Paris Hospital on the 13th of the month. Five deaths among adults attributed to diarrhœa also occurred during the same week. We cannot be certain as to whether sporadic cases of cholera continue to make their appearance or not in other parts of France in the absence of any official or definite information on the subject, but the disease has presumably ceased there.

One of the remarkable and significant peculiarities of cholera has been frequently exhibited during the progress of the present epidemic. We allude to the localisation of the disease, its persistent adherence to places, districts, streets or individual houses. The occurrence of more than one case or of several cases in succession in the same house or locality, and sometimes with considerable intervals of time between them, has been frequently noticed. It was from observing this that the Indian practice of immediately evacuating an infected house or locality was adopted and followed with such success in that country. Low-lying sites, moisture, proximity to rivers and the outfall of sewers, and overcrowding of houses or population have also been influential factors in the incidence and spread of the disease, and as regards its importation it it has frequently happened on searching investigation that cholera which was said to have been imported into a place at a given date has turned out to have been already there.

We are anxious to possess more particulars as to the results of the various bacteriological observations that have been made during the progress of the epidemic. So far as is known up to the present time the comma bacillus is practically confined to the intestine; it is rarely found in the vomited matters; it is not present in the blood or in the different tissues and organs of the body generally. Cholera discharges are *sui generis*; they are not found in any other disease and are distinctive of cholera, and it therefore requires to be shown that the bacillus is not merely a concomitant, but the cause of that condition; for, notwithstanding all that has been said on the subject, it has not yet been satisfactorily determined that the lower animals on inoculation with the bacillus manifest the same conditions or the same morbid phenomena that characterise cholera in man.

CHOLERA IN FRANCE.

(FROM OUR SPECIAL CORRESPONDENT.)

A VISIT TO DIEPPE.

Cholera during the Bathing Season.—Severe Cases.—The Tide and the Subsoil.—How Gutters should be Flushed.—Contaminated Water of the Port.

THERE are few towns on the French coast better known to Englishmen than Dieppe. More than 100,000 passengers, the vast majority of whom are English, pass through Dieppe annually on their way to or from Paris; also, as Dieppe is a most attractive sea-bathing summer resort, a great number of persons of all nationalities, but principally American, English and French, spend some portion of the summer

in this gay and attractive town. The sanitary condition of Dieppe is therefore of more than local interest, and this is particularly the case now that events have unfortunately shown that the town has not been free from cholera. This summer, while Dieppe was still crowded with fashionable visitors, the cholera broke out. The first case occurred on Aug. 17th, and Dr. Allemand, the "Doctor for Epidemics," failed to find any evidence tending to show that the case was imported. The victim was a woman, suffering from organic disease, who could not go out of her house and therefore had not been travelling. The second and third cases were reported on Aug. 22nd and 24th. There seemed to be no connexion between these three cases, they occurred in different quarters of the town, and the patients were unacquainted with each other. In the third case the death was very sudden, and there could be no doubt as to the true Asiatic character of the cholera. So serious were the symptoms that two days later, on August 26th, a special service was organised to cope with the epidemic that was probably at hand. The ordinary patients were removed from the west wing of the town hospital, and the pavilion, consisting of two floors, was at once converted into a cholera hospital. On the first floor there are three rooms—one was allotted to men, the other to women, and the third was utilised as an observation room for doubtful cases. All the provisions for the cholera wards were passed in by the window, and great care was taken to isolate this part of the hospital. But one case occurred, and this in a manner for which the authorities can scarcely be held responsible. The patients were not allowed to receive visits from the members of their families. There was a special mortuary room for cholera cases, and burial generally took place two or three hours after death. All soiled linen was soaked in a solution of sulphate of copper for several hours. The dejecta and vomit were mixed with chloride of lime and buried in the garden of the hospital. All clothing was burnt till a stove for disinfecting by steam, super-heated under pressure, was obtained. The nurses were forced to change clothes and wash their hands on leaving the dormitories; 85 serious cases were treated in the hospital and there were 51 deaths; then 11 men and 19 women died in the town. In all 123 cases of cholera were reported to the Mayor, and Dr. Allemand is under the impression that there were altogether 80 deaths. On the other hand, at the Ministry of the Interior, only 69 deaths had been reported, but before full reports reach headquarters there is some delay. In any case, as Dieppe is but a small town with a population of 23,050 inhabitants, the epidemic was serious, though the facts were well concealed from the public at large. It was serious not only by reason of the number of cases, but because of their severity. Out of 48 deaths observed at the hospital 32 occurred within six to twenty-four hours after the admission of the patients. Four patients died in less than six hours, 15 in less than twelve hours and 4 in less than eighteen hours. There were also at the hospital 10 cases brought in from neighbouring districts outside Dieppe and only 4 recovered. The slight discrepancies in these figures do not affect the main features of the epidemic. In all these cases premonitory diarrhœa was very rarely observed. The patients had no pulse but a "fishy, dark, glutinous skin" and seemed to die of asphyxia. The total suppression of urine was very frequent and was treated by the administration of benzoate of caffeine. It is important to note that no case of illness among infants less than two years old was reported as cholera, however similar the symptoms might have been. The Mayor was at once informed of every case of cholera, and when the patient's room was evacuated it was disinfected by the burning of sulphur in the proportion of 50 grammes per cubic metre of space. Cases of contagion in members of the same family seemed clearly established, but there was no evidence to show that there was contagion in districts. In one case father, mother and child all had cholera one after the other and the child alone survived. Everything in this house was burnt by order of the Mayor. There were several cases of the wife or of the husband dying the one shortly after the other, but there was nothing to show that the cholera was conveyed from district to district; it seemed to spring up spontaneously in various directions. For instance, the first case happened at the outskirts of the town, to the south of the Berigny Dock beyond the town railway station. The second case was at Le Pollet, the small and poor district on the eastern side of the port. These two first cases therefore were about as far apart from each other as is possible without overstepping the boundaries of the town. Then a number of cases occurred on the other side of the port, in the narrow streets of the old sailors' quarter immediately behind the station in the tidal, where the passengers from Newhaven land. There were also cases at the cattle market. Thus the cholera broke out at the southern, the eastern, the northern and the western extremities of the town. Nor were the central districts exempt. The poor, the badly lodged, the intemperate were the principal sufferers, but there were others also who contracted the disease and who were neither poor nor intemperate. Then, when the cholera ceased, it was immediately followed by a small epidemic of typhoid fever. There were 24 cases and 4 deaths. Ten cases occurred in the town and 14 in the hospital. Four patients contracted typhoid fever and some of the hospital nurses, Sisters of Mercy and washerwomen also suffered. The latter cases were attributed, not to any special contagion, but to special susceptibility induced by the great strain and fatigue endured during the cholera epidemic.

As Dieppe enjoys the reputation of being a very healthy town, many persons will be surprised to hear that it has suffered, comparatively speaking, so severely. Though the cholera has broken out in a great number of places, there have been but few victims, excepting at Havre. Consequently the number of cases and of deaths at Dieppe compares unfavourably with the many other towns that have had but slight visitations of cholera. Yet Dieppe has a good water-supply, a good air supply and a soil not likely to be easily contaminated. By a good air-supply I mean that the town is constantly swept by strong sea winds which should purify its streets. A great part of the town faces the beach and the beach faces the north-west. By an ingenious diagram in the accompanying map the direction of the winds is indicated for the four seasons of the year. It will be seen that the prevailing winds drive up the Channel from the west, the south-west and south. On the other hand, the north-east, east and south-easterly winds, which are the land winds, are of rare occurrence.

The water-supply of Dieppe dates back several centuries, when an aqueduct was constructed to St. Aubin and brought a large quantity of water to a reservoir at the foot of Dieppe Castle; but eight years ago another and supplementary aqueduct was built, together with a much larger reservoir.

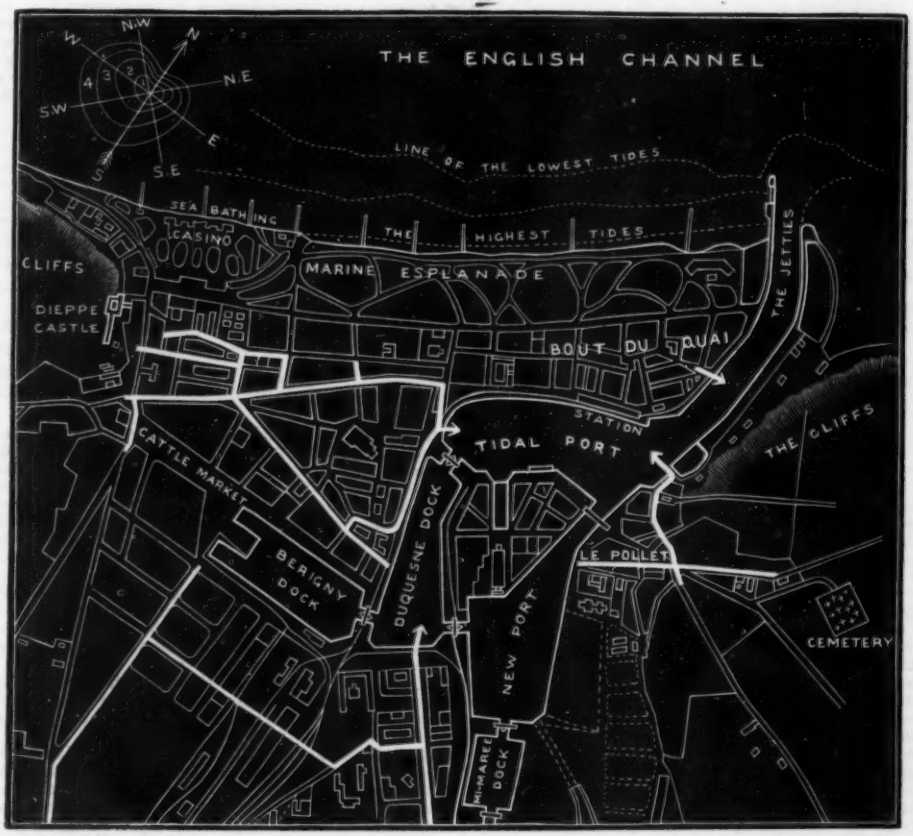
The water obtained is hard, but free from organic impurity, excepting in the autumn. The reservoir is not covered over and at that season a certain number of falling leaves are blown into the water and vegetable decomposition ensues. No evil has yet been traced to this exposure to dust and leaves; nevertheless the necessity of covering the reservoir is not only admitted, but the work is actually in hand, the expense is provided for and the reservoir will be properly covered over before next spring. For the higher quarters of the town there are two reservoirs on the heights or cliffs that are on both sides of Dieppe. They are both covered over with masonry and grass. No cattle are allowed to graze over the reservoirs and the grass is only utilised to make hay.

Dieppe is situated between two ranges of cliffs, each some eighty metres high. The name of the town is derived from the English word "deep." When Normandy belonged to England it was known as the "deep port," and some nine centuries ago the sea went about four miles further inland up the valley of the Arques. As the sea receded it left behind flint pebbles and these, mixed with clay brought down by the river Arques, formed the soil on which the town of Dieppe now stands. The sea tide can still run up between these flint stones and this should be a great advantage from a sanitary point of view. First, it compelled the inhabitants of Dieppe to build an aqueduct long before the importance of a pure water-supply was fully appreciated, because all the water in the wells was brackish; secondly, the tide working its way backwards and forwards below ground must help to drain and purify the subsoil. We have already seen how at Havre, in the Perret district, where the subsoil is washed by the tide in a similar manner, there was less typhoid fever and less cholera than in other quarters of the same town where no such purifying force exists. In respect therefore to its air-supply, its water-supply and the nature of its subsoil, Dieppe is especially fortunate. Why, then, has this town suffered more than so many of its neighbours? Certainly Dieppe was more exposed to the risk of contagion than most of its neighbours, but there is no evidence, at least with regard to the first cases, to show that they were due to contagion. Nevertheless there were any number of Parisians at Dieppe, and if the

cholera can be brought from one town to another town by travellers, then for several months Dieppe was daily exposed to this danger. If, however, in respect to the air, the water and the subsoil, Dieppe enjoys special advantages, the old quarters of the town are dirty, the houses high, overcrowded, and the inhabitants poor. A great number of these houses date from 1694, when the combined Dutch and English fleets bombarded and in a great measure destroyed Dieppe. The town was then rebuilt and, in those days, the knowledge of domestic sanitation was very limited. Most of the houses have no proper closets. I was assured, on good authority, that four-fifths of the population have *tinettes*, that is to say a large wooden tub placed in a cupboard generally at the top of the house. There are three or four companies that undertake to remove these tubs or pails into the flint subsoil and the sea tide carries their contents away. These *bétoires* are generally twenty-five to thirty feet deep, but in course of time they become so choked up that they cease to be porous. They then have to be emptied in the ordinary way, and men go down and scrape the sides to render them porous again. Thus only one-fifth of the houses have cesspools and only one-quarter of these cesspools are water-tight, and therefore do not contaminate the surrounding subsoil.

The slop or kitchen water of the houses at Dieppe, as is the case in most towns of Normandy, drains into the street gutters and from thence into such sewers as exist. But before reaching the sewers it has here, as elsewhere, many opportunities of sinking into the ground and of helping to befoul the subsoil. Formerly most

[DIEPPE



The broadest white lines indicate the sewers and the arrow-heads the sewer outfalls. The diagram indicates the direction of the winds during each of the four seasons of the year. In the original diagram, of which this is a proportionate reduction, every millimetre represented three days of wind.

and convert the contents into guano; but it is left to the choice of the inhabitants whether they give notice or not when their pails are full. A great many poor people seek to avoid the expense entailed by the removal of the pails; but there is a by-law forbidding the emptying of night soil into the street gutters. It is, however, notorious that there are numbers of persons who actually have the patience to dissolve the solids so as to be able to throw them out into the street gutter without being detected by the police. This disgusting practice is all the more easy because the police, as a body, are badly recruited and doubtless themselves resort to the same expedients in their own homes. The remaining fifth of the inhabitants have cesspools, and of these cesspools three-quarters are *bétoires*—namely, are as porous as possible. They are dug of the streets had but one central gutter and there were very few sewers. Some years ago, however, the town raised a loan of close on £80,000, which was spent chiefly on sanitary improvements. The water that ran down the street gutters was so limited in quantity that it required a good storm to thoroughly cleanse them. From 1880 to 1882 these central gutters were abolished. The earth underneath them was found to be very black and foul. It was removed, new pavement was put on the streets and two side gutters provided. At the same time the water supply had been greatly increased by the building of new reservoirs and water mains. A number of street fountains were created from whence water could be discharged into the gutters. M. Condor, the town architect or borough surveyor, then introduced an important innovation. At Rouen, Paris and most towns the

street gutters are washed twice a day, when a large quantity of water is discharged into them. But at other times the gutters are almost dry. At night especially, just when people empty the worse filth into the gutters, there is no water to carry it away. It has therefore ample time to sink in between the pavement stones and befoul the subsoil. At Dieppe it was resolved not to flush the gutters twice a day with a large volume of water, but to allow a small quantity of water to run in them all day long and all night. This had the advantage of keeping the gutters always clean, and was not extravagant, for it economised the cost of sending men round twice a day to open and shut the hydrants; nor were there valves to get out of order from constant opening and shutting. If the street is long, and there is no sewer near, then the amount of water running in the gutter is increased; but if the sewer is near, then less water is given. The amount varies from six to fifteen litres per minute coming from each of the numerous water-delivery pipes. The efficiency of this method has been proved, for during the twelve years that it has existed opportunities have occurred of digging up some of the gutters, notably at the Bout du Quai, behind the Maritime Station. Though this is one of the worst quarters of the town, the sand beneath the gutters was found to be quite clean, and very different from what it was under the old method of intermittent flushes. This is, however, just one of the quarters where there has been many cases of cholera. Then, if the map of Dieppe be studied, it will be seen that this district is so close to the beach that it must greatly benefit by the wash of the tide. Why should it not, as a result of this circumstance, have in some measure escaped from cholera like the Perret district at Havre? Perhaps because the houses at the Bout du Quai of Dieppe are older, higher, and if they have the sea on one side, they have on the other side the very foul water of the port.

In building sewers for Dieppe no care whatsoever has been taken of the outfall. The principal outfall is by the fish-market, at that end of the tidal port which is the farthest removed from the sea. On the other side of the port, but nearer the sea and almost immediately opposite the Maritime Station, there is the sewer outfall of the Pollet district. This is equally a very poor quarter and has much suffered. Thus the two worst districts face each other at the entrance of the port, and the port that separates them receives the entire sewage of the town. Further inland, on either side and behind the town railway station, there is a comparatively new district. Here some sewers have also been built and their outfall is in a worse place even than that of the sewers from the older portion of the town. The outfall is in the dock called the Bassin Duquesne. Thus the sewage cannot flow away except when the dock gates are open and the outfall is at the extremity of the dock, farthest away from the dock gate leading into the tidal port. Thus a portion of the sewage is delayed in the dock before it reaches the port; it has time to make deposits which still further contaminate the water. The port is therefore very foul, and this may be one of the causes why cholera gained ground in Dieppe. The subsoil of Dieppe ought to be comparatively pure, because it is washed by the tide; but a glance at the map will show that the greater part of Dieppe lies between the sea and the port and docks. Perhaps infiltrations from the port have done more to befoul the subsoil than the tide of the sea to purify it; and in this respect the position of Dieppe is not similar to that of the Perret district at Havre. The position of the Pollet district is different. It is separated from the sea by the cliffs and possibly when the tide rises the water passing under the Pollet district comes in from the port which it touches rather than from the other side of the cliffs. Thus it is that, though the subsoil waters of Dieppe should be comparatively pure because the tide flows in and out through the flint stones, the water from the dock and port, heavily charged with sewage that finds no ready exit to the sea, may also pass into this porous subsoil and by its foulness defeat the wholesome effect of the pure sea water that comes in with the tide.

In any case, there can be little doubt that the waters of the port are dangerous. Four cases of cholera seem to be due to the effects of the water in the port. A sailor, an abstemious, steady, healthy man, slept on board a tugboat in the harbour close to the sewer outfall. He contracted cholera and died. Another sailor who slept on board a fishing-boat also died of cholera, but he was a man of intemperate habits. The third case was that of a man of steady habits and with ample means. He likewise slept on board a fishing boat and died of cholera after four days' illness. The fourth case was more remarkable. This was that of a man who lived at a long distance from the port; he was steady and in the enjoyment of perfect health. At ten o'clock in the morning he accidentally fell into the port and swallowed a considerable amount of water before he was rescued. At first he seemed none the worse for this immersion, but later in the day he was seized with cholera and died the same evening. These four cases coming from the port were among the worst that occurred, three out of the four patients dying in a few hours and the other after four days' illness.

Compared with other towns in Normandy, Dieppe is to be congratulated for the energy and enterprise shown by its municipal authorities in seeking to effect sanitary improvements. Unfortunately there is still much remaining to be done. Firstly, a suitable sewer outfall must be found. Doubtless there are topographical difficulties, but these can be overcome by the application of machinery; then there should be no reason why houses should not drain entirely into the sewers, and the filthy pails, the abominable cesspools and the flow of slop water in the gutters could all be abolished. When this has been properly done and the water in the port becomes pure and clean, Dieppe should have little cause to fear cholera.

CHRISTMAS AT THE HOSPITALS.

AT this season of the year, when peace on earth and good will to men is the prevailing sentiment, it is not strange that those institutions which have been established for the purpose of making glad the hearts and lightening the burdens of those stricken with disease should share in the feeling. The dreary hospital bed has been brightened, the weary sufferers cheered and gladdened by the manifestations of interest taken in them by many of the philanthropic at this season, as well as by those whose duty it is in the hospitals to minister to their diseases.

Charing Cross Hospital.—The annual entertainment at this hospital took place on Dec. 21st, 22nd and 23rd, when the students and their friends ministered to the pleasure of those able to attend by the performance of a farce. On Boxing Day the inmates of the various wards were entertained by the resident officers. Mr. Robert Martin delighted the little occupants of the children's ward by the presentation of a large Christmas-tree laden with toys, which will be distributed on New Year's Eve.

St. George's Hospital.—On Christmas Day all the patients at this hospital who could partake of the particular fare were supplied with roast beef and plum pudding for dinner. On the following Tuesday a tea and entertainment were provided in the wards.

St. Thomas's Hospital.—Christmas Day falling on a Sunday this year the usual Christmas dinner for the patients and the carol singing by the Nightingale nurses were postponed until the following Tuesday.

King's College Hospital.—Roast beef and plum pudding were on Christmas Day enjoyed here by many of the patients. In the evening sacred music was discoursed in the chapel. On Boxing Day presents were given to the patients and toys distributed among the children, the afternoon being occupied by the distribution of toys to the children from three large Christmas-trees and a high tea in the brilliantly illuminated wards. The men were provided with cigars &c., and all in the hospital entered into the spirit of this festive time.

Westminster Hospital.—The keeping of Christmas was here signalised by the distribution of books, cards, toys, clothing and other presents, and great efforts were made by the medical and nursing staff to make the day a happy one for the patients. On Boxing Day the good cheer with which the season is peculiarly associated was forthcoming. Full and middle diet and even such delicacies as fried fish and Irish stew were suspended for the day and, subject to the permission of the medical staff, every patient was provided with turkey or chicken, followed by plum pudding and, in the case of the men who were able to reach the convalescent ward set apart for them, by the fragrant weed, without which even all the delicacies of the season would fall somewhat flat. Later in the day tea was served also on a festive scale and such amusements were provided as sick folk can enjoy.

The Royal Free Hospital.—At this hospital the annual entertainment was given on the 15th inst. On Christmas Day the patients were regaled with fare suitable to their condition; and on Boxing Day a special tea was provided in each ward for the patients and their friends. In the Marsden Ward a dramatic performance was given by the chaplain and his friends on the 27th, the festivities being concluded on the 29th by a Christmas-tree entertainment for the juvenile patients, when over 100 children—past and present patients—were entertained at tea and received suitable presents.

Great Northern Hospital.—The Christmas dinner at this institution was enjoyed on Monday, when turkeys were provided by the doctors and dessert by the secretary. In the evening carols were sung by the nurses. The annual entertainment will take place on Jan. 10th.

Cheyne Hospital for Sick and Incurable Children, Chelsea.—Turkey and special plum pudding formed the Christmas dinner provided for the little ones at this hospital, which took place on Boxing Day, with a perfect fusilade of crackers to finish up with and a general march-past of dolls and toys.

Chelsea Hospital for Women, Fulham-road.—Christmas fare and the distribution of suitable gifts helped the patients to pass a pleasant Christmas at this hospital.

National Hospital for the Paralysed and Epileptic, Bloomsbury.—The Christmas festivities in this hospital began with an entertainment on the 22nd inst., and a "waxwork" exhibition afforded great amusement to the patients. The usual fare was provided on Christmas Day. Tea parties have been given and the occupants of the children's ward delighted with a large Christmas-tree. On Thursday a distribution of useful and ornamental articles and carol singing by the nurses concluded the amusements.

Hospital for Consumption, Brompton.—The inmates of this hospital, which was most splendidly decorated, spent Christmas Day very quietly, but on Tuesday Christmas revelries began. Turkeys, pheasants, plum puddings, jellies, oranges and other fruits were provided, together with port wine. After dinner and tea songs and games afforded healthy pleasure for the inmates of the institution. On Tuesday next the usual musical entertainment will give place to a distribution of useful and ornamental articles from the Christmas-tree.

Seamen's Hospital Society.—The sick and injured sailors in the *Dreadnought* and Branch Dock Hospital were regaled with turkeys and plum pudding on Christmas Day and every effort was made to cheer the patients. The wards were profusely decorated with evergreens and quaint devices constructed by the patients. Every man whose condition would permit was allowed a pint of beer and also to smoke in the wards. Of the 220 patients under treatment there were representatives of no less than thirty-five different nations and castes in the hospitals on Christmas Day, and the Chinaman, East Indian and African were eating their Christmas fare in goodwill by the side of the Britisher, the Scandinavian and the Italian, while the Turk, the West Indian and the Yankee joined this cosmopolitan ship's company. Christmas Day falling on a Sunday the usual entertainment for the patients was held on the following Monday, when the men had a "sing-song" and smoked in one of the wards.

Homerton Fever Hospital.—This hospital being one for infectious diseases could not entertain its inmates in the same way as many of the general hospitals, but the wards were tastefully decorated, and for such as were in a fit condition to participate the usual Christmas fare was provided. Toys were distributed to the children and entertainment provided in a moderate way.

The *French Hospital and Dispensary, Shaftesbury-avenue,* and the *German Hospital, Dalston,* observed Christmas very much in the same fashion as the English hospitals. Christmas-trees, musical entertainments, gifts and Christmas fare were provided so far as was consistent with the health of the patients.

London Hospital, Whitechapel.—As Christmas Day came on Sunday, Saturday was set apart for the usual entertainment of the 650 patients in the wards, which were extensively and very tastefully decorated. The patients' Christmas dinner consisted of roast beef and plum pudding, after which they were allowed to smoke, cigars and tobacco being thoughtfully provided by the house physicians and house surgeons. Various entertainments were given—theatricals, concerts, nigger minstrels, songs, recitations, magic lanterns and various side shows. All convalescent patients were up and dressed, and those who could not leave their beds were wheeled into the centre lobbies of the wards, where they could see the entertainments. On Boxing Day the sisters and nursing staff, now numbering over 250, enjoyed their Christmas dinner. The children's Christmas-tree entertainment and tea will take place on Jan. 3rd.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5915 births and 3915 deaths were registered during the week ending Dec. 24th. The annual rate of mortality in these towns, which had increased from 18·8 to 20·7 per 1000 in the preceding three weeks, declined again last week to 20·0. In London the rate was 19·6 per 1000, while it averaged 20·3 in the thirty-two provincial towns. The lowest rates in these towns were 12·2 in Plymouth, 14·5 in Cardiff, 14·7 in Derby and 15·3 in Portsmouth; the highest rates were 25·1 in Manchester, 25·6 in Bolton, 26·7 in Hull and 27·3 in Brighton. The 3915 deaths included 382 which were referred to the principal zymotic diseases, against 445 and 448 in the preceding two weeks; of these, 126 resulted from measles, 81 from diphtheria, 56 from whooping-cough, 51 from scarlet fever, 38 from "fever" (principally enteric), 22 from diarrhœa and 8 from small-pox. No fatal case of any of these diseases occurred last week in Birkenhead or Burnley; in the other towns they caused the lowest death-rates in Huddersfield, Plymouth, Swansea and Wolverhampton, and the highest rates in Hull, Cardiff, Brighton and Bolton. The greatest mortality from measles occurred in Croydon, Salford, Bolton, Cardiff, Hull and Brighton; from whooping-cough in Leicester and Bolton; and from "fever" in Preston. The mortality from scarlet fever showed no marked excess in any of the large towns. The deaths from diphtheria included 60 in London, 3 in Liverpool, 3 in Birmingham and 3 in Salford. Three fatal cases of small-pox were registered in Leeds, 2 in Leicester, 2 in Halifax and 1 in Oldham; 34 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and not one in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3299, against numbers declining from 4067 to 3621 on the preceding seven Saturdays; 241 new cases were admitted during the week, against 302, 273 and 286 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 339 and 365 in the preceding two weeks, further rose to 380 last week, but were 135 below the corrected average. The causes of 75, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Bolton, Oldham, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Birmingham, Liverpool and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding six weeks from 20·6 to 25·5 per 1000, declined again to 24·0 during the week ending Dec. 24th, but exceeded by 4·0 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·5 in Greenock and 18·4 in Paisley to 29·2 in Perth and 30·5 in Leith. The 667 deaths in these towns included 86 which were referred to measles, 13 to scarlet fever, 11 to whooping-cough, 9 to diphtheria, 8 to diarrhœa, 4 to "fever" and 1 to small-pox. In all, 132 deaths resulted from these principal zymotic diseases, against 156 and 136 in the preceding two weeks. These 132 deaths were equal to an annual rate of 4·7 per 1000, which exceeded by 2·7 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had declined from 112 to 87 in the preceding three weeks, were 86 last week, of which 26 occurred in Glasgow, 25 in Edinburgh, 15 in Leith and 15 in Dundee. The deaths referred to scarlet fever, which had been 13 and 18 in the preceding two weeks, declined again to 13 last week and included 9 in Glasgow and 2 in Aberdeen. The 11 fatal cases of whooping-cough exceeded by 6 the number in the previous week and included

8 in Glasgow. The deaths from diphtheria, which had been 13 and 10 in the preceding two weeks, further declined to 9 last week, of which 5 occurred in Glasgow and 2 in Dundee. Of the 4 fatal cases of "fever," 2 were recorded in Edinburgh, where a death from small-pox was also registered. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 134 to 198 in the preceding three weeks, declined to 168 last week, and were 80 below the number recorded in the corresponding period of last year. The causes of 69, or more than 10 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 22·8 to 24·9 per 1000 in the preceding four weeks, further rose to 26·7 during the week ending Dec. 24th. During the first twelve weeks of the current quarter the death-rate in the city averaged 23·7 per 1000, against 18·1 in London and 23·8 in Edinburgh. The 179 deaths in Dublin during the week under notice showed an increase of 12 upon the number in the preceding week, and included 9 which were referred to "fever," 2 to measles, 1 to scarlet fever, 1 to whooping-cough, 1 to diarrhœa, and not one either to small-pox or diphtheria. In all, 14 deaths resulted from these principal zymotic diseases, equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 2·2 in London and 6·3 in Edinburgh. The deaths referred to different forms of "fever," which had been 2 and 4 in the preceding two weeks, further rose to 9 last week and, with one exception, exceeded the number recorded in any preceding week during the current year. The mortality from scarlet fever and from diarrhœa showed a decline from that recorded in the previous week. The 179 deaths registered in Dublin last week included 22 of infants under one year of age and 44 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons differed but slightly from those returned in the preceding week. Six inquest cases and 3 deaths from violence were registered and 48, or more than a fourth, of the deaths occurred in public institutions. The causes of 18, or 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

STAFF-SURGEON-COLONEL A. C. GAYE and Surgeon-Captain R. E. Kelly have arrived home from India. Brigade-Surgeon-Lieutenant-Colonel W. McWatters has proceeded to Portsmouth for duty. Surgeon-Captain T. B. Winter, A.M.S., embarked for India on the 15th inst. The following officers have arrived in England on completion of a tour of service abroad:—Brigade-Surgeon-Lieutenant-Colonel Steele and Surgeon-Major Robbins. Surgeon-Lieutenant-Colonel Joynt has left Ceylon in Medical Charge of drafts on his way to England. Surgeon-Captain M'Carthy has been transferred from Cork to Kinsale and Surgeon-Captain Garner to Cardiff.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel James Keith Anderson, M.D., 2nd Volunteer Battalion Black Watch (Royal Highlanders), to be Surgeon-Lieutenant-Colonel; Surgeon-Captain Edward Bass Reckitt, 1st Lincolnshire Volunteer Artillery (West Liverpool R.A.), to be Surgeon-Major; Surgeon-Captain George R. T. Phillips to be Surgeon-Major.

ARMY MEDICAL SERVICE.

Yeomanry Cavalry: Shropshire: Veterinary-Lieutenant H. Barnes to be Veterinary-Captain. 1st Durham (West Division, R.A.): Surgeon-Lieutenant J. J. A. V. C. Raye to be Surgeon-Captain; Surgeon-Lieutenant-Colonel Napoleon Bisdee Major to be Brigade-Surgeon-Lieutenant-Colonel.

INDIA AND THE INDIAN MEDICAL SERVICE.

2nd Bombay Infantry (Grenadiers): Surgeon-Captain J. B. Smith, I.M.S., to officiate in Medical Charge, vice Surgeon-Captain A. Milne, I.M.S., transferred temporarily to the Civil Department. Surgeon-Captain H. J. Parry, A.M.S., is transferred from general duty, Bombay District, to general duty, Poona District. Surgeon-Captain R. J. A. Durant, A.M.S., is transferred from general duty, Poona District, to general duty, Bombay District. The services of Surgeon-Major A. F. Ferguson, M.B., I.M.S., are placed at the disposal of Government for employment in the Civil Department. Surgeon-Captain J. Chaytor-White, M.B., I.M.S. (Bengal), is appointed to officiate during the absence of Brigade-Surgeon-Lieutenant-Colonel T. Ffrench-Mullen, M.D., as Medical Officer of the Meywar Bhil Corps. Surgeon-Colonel R. P. Ferguson, M.S., is placed on the Administrative Medical Staff of the Army, vice Surgeon-Colonel T. Rudd, M.D., transferred to the home establishment (dated Oct. 27th, 1892). The undermentioned Surgeon-Lieutenants of the Indian Medical Service, appointed to the Bengal Establishment, reported their arrival at Bombay on the dates specified: C. G. Robson Scott and H. M. Earle. Surgeon-Lieutenant-Colonel C. Cameron, I.M.S., Bengal Establishment, is permitted to retire from the service from Sept. 21st, 1892, subject to Her Majesty's approval. Surgeon-Captain F. J. Dowes, I.M.S., has returned from furlough out of India. Surgeon-Captain A. E. Grant, M.B., Professor of Hygiene, Medical College, sub. *pro tem.*, is confirmed in that appointment from Oct. 3th, 1892. Surgeon-Captain D. G. Marshall, I.M.S., has been posted to the Civil Medical Charge of Roorkee, in addition to his military duties, from the date of taking charge from Surgeon-Lieutenant-Colonel T. O'Reilly.

NAVAL MEDICAL SERVICE.

Staff-Surgeon Richard E. Biddulph has been appointed to the *Canada*. Surgeons: George M'Gregor to the *Canada* and Charles G. Matthews to the *Vernon*.

VOLUNTEER CORPS.

Light Horse: 1st Forfarshire: Surgeon-Lieutenant W. T. Grant has resigned his commission.—*Rifle:* 3rd Volunteer Battalion, the King's (Liverpool Regiment): William Joseph Murphy Barry, Gent., is to be Surgeon-Lieutenant. 1st Cadet Battalion, the Queen's (Royal West Surrey Regiment): Acting Surgeon T. Holmes has resigned his commission; James Herron, M.D., is to be Acting Surgeon.

THE SICKNESS AT PESHAWAR.

It is reported in the Indian papers that in compliance with the desire expressed by Lord Roberts Surgeon-Colonel Cleghorn, Inspector-General of Civil Hospitals, has proceeded to Peshawar to inquire into the nature of the fever prevailing among the troops there and into the sanitary condition of the station generally. Dr. Evans, attached to the Medical College at Lahore, accompanied Surgeon-Colonel Cleghorn to aid him in the investigation.

MEDICAL OFFICERS OF THE FOOT GUARDS.

The World says that the new system affecting medical officers of the Brigade of Foot Guards is not likely to prove popular. The medical officers are not quite contented with their position, nor are the members of the Brigade satisfied either. It is one of those changes which *The World* thinks would have been better left alone.

THE OPENING OF THE NEW NURSES' HOME, EDINBURGH INFIRMARY.

In connexion with the opening of the large building intended as a new home for nurses at the Edinburgh Royal Infirmary, which took place on the 19th instant, we may mention that the suggestion for its provision was first made by the late Surgeon-General Fasson, to whom a memorial tablet is to be placed in front of the building. The successor to the late superintendent is, as we have already announced, Surgeon-Major General Lithgow, M.D., C.B., D.S.O., at present acting as the principal medical officer of the Southern District. The election of this officer for the post speaks well for the reputation enjoyed by the late superintendent and for the opinion which the officials of the Royal Infirmary apparently entertain of a previous training in the army as a qualification for the duties of the appointment, which are difficult to adequately fulfil.

PHYSICAL DEVELOPMENT.

Surgeon-Captain Deane has written to our service contemporary the *Broad Arrow* to explain that he decried as useless for muscular development, though excellent as acrobatic performances, certain gymnastic exercises as tests of strength or endurance. Horizontal and parallel bars when properly used are, however, essential in military gymnasia and there are not half enough of them, but the recruit should be led up to the use of these by previous exercise on the ground with dumb-bells in order to obtain their full benefit. This develops the muscles of the arms and chest as well as those of the back and lower limbs. The great point to be secured in the physical training of the recruit is the symmetrical development of every part of the body

THE AGE RETIREMENTS IN THE MEDICAL STAFF IN 1893.

Five officers of the rank of Surgeon-Major-Generals and six of the rank of Brigade-Surgeon-Lieutenant-Colonels &c. are due to retire in the course of next year.

FEVER AT MALTA.

According to an Exchange Company's recent telegram from Malta fever is stated to be increasing among the soldiers of that garrison. It may be assumed that cases of typhoid fever are included under the term "fever," for enteric fever commonly prevails to some extent in Malta during the autumn and early winter. The health of the troops in that command of late years has, we believe, been much better than it was many years ago in this respect, and this has been attributed to the sanitary works that have taken place in the way of water-supply and drainage. Although the barracks have been improved and a large proportion of the troops are encamped during the summer months with manifest advantage to their health, it cannot be said that the barrack accommodation is satisfactory. The buildings are generally old and some of them badly placed, consequently they are not of the construction considered necessary by modern sanitary requirements. The native population is large and generally poor and a good deal of overcrowding exists in the towns. The chief military hospital is not at all a good one and occupies a bad site; but, after all, it is to the character of the barrack accommodation provided for the troops that we must look for the prevention of disease, and for this reason we should be glad to hear that additional barracks are to be built on some healthy open site at a reasonably convenient distance from Valetta or the other overcrowded towns of Malta.

REPORTS ON RECRUITING.

The War Office has given orders for assistant adjutant-generals for recruiting and officers commanding regimental districts to send in their reports by Jan. 7th; but on the previous day colonels of cavalry and battalions of foot guards are to send to the Horse Guards a special report showing the growth and development of recruits joined during the past year who, at the time of their enlistment, were under the regulated standard of height, weight or chest measurement. Returns, reports and discussions regarding recruits are constantly cropping up, and somehow or other our system does not seem to work very satisfactorily. The army is not popular with "the masses" whatever it may be with "the classes"; whilst the number of candidates for Sandhurst and Woolwich is overwhelming, it is quite the reverse as far as recruits are concerned, although we believe that just at the present time they are fairly numerous. It has often seemed to us surprising, under these circumstances, that the strength of the Royal Marines is not increased. It is a very popular service and there would be no difficulty in enlisting any number of recruits for it. The men of that corps are of fine physique; they cover on parade a larger amount of ground than other troops; they are well-drilled, excellent soldiers, and as they are in the main a very healthy, contented body of men, their state of discipline is perfectly satisfactory. Why not, therefore, increase their numbers?

Correspondence.

"Audi alteram partem."

RICHARD OWEN AND JOHN HUNTER.

To the Editors of THE LANCET.

SIRS,—Ham churchyard was the scene to-day of an unwonted throng when the great naturalist was laid to rest. Our own profession was well represented by the President of the College of Surgeons, by Sir Joseph Fayrer and others, and many leaders in science stood around. The simple service in the church seemed well to befit the veteran who is gone; thoughts of his genial yet reverent spirit in peaceful old age came over the mind as the preacher read of man that liveth by reason of strength to fourscore years. The stillness was unbroken save by the twittering of birds in the leafless trees. The level rays of the low December sun shone on the company of mourners. It had been overcast with heavy grey clouds, but as the service went on the sky grew clear and blue and the dark clouds lay piled away on the eastern horizon, their summits tipped with rosy light from the setting sun—a peaceful close to a long day of life. Few now living knew Sir Richard Owen in his prime. He became famous early, and even the old amongst us have looked up to him as a leader from their own young days. He was a link with past generations and his memory is worthy to be cherished. My own knowledge of him was only in his old age, when his work was done and he was quietly waiting for the end; yet there was about him still a wonderful grace of manner, a kind and cordial speech and nothing of that impatience of new ways and discontent with their surroundings which is ofttimes excusable in old men. He loved to speak of his own work, but not in pride, and looked upon his honours rather as kindnesses received than as rewards for merit. Especially he would talk of Cuvier and how when Cuvier, obliged to flee France, was studying in the Hunterian Museum Owen was appointed to attend on him, and how cordially they worked together "like friends." A fine large medallion of the great Frenchman adorned Sir Richard's study; above it an admirable miniature of John Hunter, inherited from Wm. Clift and highly prized by him; above this a portrait of William Clift himself in his old age; and Sir Joseph Banks surmounting all. It is as a link with Hunter that I would speak of Owen. Although not born until eleven years after Hunter's death, Owen earned the right to be his chief interpreter. Indeed he comes down to us in direct succession from Hunter. William Clift was Hunter's last and favourite pupil and "entered most [I quote from Owen's words to me] into his master's spirit. His was a singular example of lifelong devotion, entire and absolute, to one object—the memory of his master, John Hunter, and the care of his collection. He had no aims of his own, no thought of distinguishing himself; his one care was the pursuit of his master's work."[1] With such a man was Owen associated, as his assistant in the care of Hunter's Museum from 1827 to 1842, when he succeeded Clift, already bound to the latter by the close tie of a son to a father. William Clift died in 1849. When Owen published in 1861 the well-known edition of Hunter's (posthumous) Essays and Observations, taken from copies so long preserved by Clift, he wrote in his dedication that his "labours in making known the thoughts and works of the founder of philosophical surgery" were now terminated. He told me himself that it had been throughout life one of his chief aims to preserve the memory and carry on the work of that great man. And so in losing Owen a link which bound the present with the life and work of John Hunter is broken and his days seem to recede into a more distant past. The coming year is the centenary of John Hunter's death, which took place on Oct. 16th, 1793. It would surely be fitting to commemorate in some way this event. The Hunterian Society (of which I am one of the honorary secretaries) will, I think, make some endeavour to this end, but it is much to be hoped that some larger bodies will take the matter up. Not alone the medical art, but the kindred study of biology in its wider bearings owe much to John Hunter, and I trust that next October will witness some worthy memorial of his name and fame. I am, Sirs, yours faithfully,

Dec. 23rd, 1892. R. HINGSTON FOX.

THE LATE DR. WALSHE.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the letter of Dr. Sturges, in your last issue, on Dr. Walshe. I only had the honour of Dr. Walshe's friendship during the last seven years of his life, but confess that the interpretation of his character which Dr. Sturges sets forth does not altogether satisfy me as being a correct image of "the man." Of his method and of his refinement in observation and description I think his account is excellent; but Dr. Sturges appears to me to view Walshe as a physicist who degenerated into a metaphysician. The conclusion which my intercourse with him would lead to is that he was a metaphysician who had forced himself in a measure to become a physicist, but only in a measure, for he had in a rare degree the attributes of both. His refinement in description, indeed, was, in my opinion, a consequence of that mental habit which felt itself surrounded by "unending Nature," as various in expression, as unfathomable in itself. He was good enough at one time to express concern lest I should develop too metaphysical a vein, and advised me to stick to clinical work. "That's

[1] See also the Memoir of William Clift (a brochure), by Owen.

the thing that pays," he said; and added, "I never published anything metaphysical until I could afford to do without medicine." That his exquisitely sensitive nature under the influence of physical pain, was apt at times to take a materialistic and pessimistic view of things must be well known to his friends; but this was but a symptom of suffering. Walshe had too great an intellect and too much music in his own soul not to echo the harmonies of the "Unseen," and although, like the Æolian harp, he may not always have known whence the movement came, when free from physical distress his fine organisation felt it and the music was there. The marvel to me is that one so endowed with the faculty for abstract speculation should have so mastered what he himself termed the "fascination" of that tendency as to place himself in the front rank of the physical observers of his day. Whether the method of Walshe or the method of the present day will be most lasting in its influence remains for the future to decide.—I am, Sirs, yours faithfully,

Dec. 26th, 1892. X. Y.

THE VALUE OF SUTURES IN THE TREATMENT OF CUT THROAT.

To the Editors of THE LANCET.

SIRS,—I have read Mr. Henry Morris's clinical lecture on the value of sutures in the treatment of cut throat, reported in your last issue, with much interest, and desire, by reference to my own experience, to support the practice which Mr. Morris has so ably advocated. The improved treatment of cut throat is but one more instance of the way in which aseptic surgery has revolutionised old methods of treatment. No doubt the dread of putting sutures in deep wounds of the throat was amply warranted in the days of septic surgery; but that it should still hold sway in the surgical mind is strange indeed. By careful suturing wounds in the throat, which formerly took many weeks to close by granulation, may now heal in as many days. During the period between October, 1882, and October, 1884, whilst I was resident surgical officer in the Manchester Royal Infirmary, it was my duty to initiate the treatment of several bad cases of cut throat and I soon emancipated myself from the dread of sutures. Two of my cases were so very similar to those described by Mr. Morris that I should like to refer to them. The cuts had passed through the thyro-hyoid membrane close to the thyroid cartilage, and had so completely severed the connexions between the latter and the hyoid bone that the larynx dropped down, leaving a wide gap through which the posterior wall of the pharynx was displayed. It seemed hardly possible for such wounds to heal without sutures. At first I tried to suture the thyro-hyoid membrane, but owing to the small amount of that structure which was attached to the thyroid cartilage the hold of the first few stitches inserted was insufficient to bear the strain, for the muscles attached to the hyoid bone on the one hand and to the thyroid cartilage on the other held these structures apart with considerable force. In order to overcome them a suture was passed over each great cornu of the hyoid bone by means of a Liston's needle, and by the same means the deep end of each suture was drawn through the upper part of the alæ of the thyroid cartilage. These sutures were tightened up and tied simultaneously. In this way the larynx was suspended from the hyoid bone and all strain on the thyro-hyoid membrane was removed. The edges of the latter membrane were then accurately adjusted with fine sutures. The ends of the wound in the superficial tissues were sutured, but the central part was left open. This treatment proved very successful in both the cases. In recent years the practice of suturing the tissues layer by layer has been pretty generally employed, and in my opinion Mr. Morris is quite right in making no exception in the neck.

I am, Sirs, yours faithfully,

BILTON POLLARD, F.R.C.S. Eng.

Harley-street, W., Dec. 22nd, 1892.

To the Editors of THE LANCET.

SIRS,—The very interesting and instructive clinical lecture of Mr. Morris, in the last issue of THE LANCET, reminds me of a case of cut-throat occurring in the same individual on three separate occasions. The patient was under the care of the late Mr. Taylor, of Wargrave, Henley-on-Thames. He was the proprietor of a small roadside inn and was addicted to intemperate habits, and it was during these freaks that he attempted suicide by cutting his throat with an ordinary table knife. His first "performance" upon his neck occurred somewhere about the year 1864, his second the following year, and his last "operation" about eighteen months subsequently. I was assistant to Mr. Taylor and was present on each occasion when this publican was attended. The first and second wounds were situated above the pomum Adami and extended, as far as I can recollect, about two inches and a half on each side of the median line. No important structures were severed, nor did any vessel need torsion or ligature. The last wound, which was inflicted below the old scars, however, was of a more serious nature, inasmuch that the trachea was divided, yet no vessel required to be dealt with. The man resided about a mile off, and was attended at his house on his first and second injury, but on the last occasion he was conveyed to the surgery in a wheelbarrow. The treatment adopted throughout consisted of several silk sutures, bandages and lead lotion, his head not being fixed, and he was fed from the beginning with beef-tea and milk. He eventually succumbed from some pulmonary complication, I think, within a week of his last attempt upon his life.

I am, Sirs, yours obediently,

Camberwell-green, Dec. 26th, 1892. J. FRENCH BLAKE.

"CHLOROFORM ADMINISTRATION."

To the Editors of THE LANCET.

SIRS,—The conclusions of the Hyderabad Commission as to the way in which chloroform kills not having met with universal acceptance, I think it right that all cases of death from chloroform should be reported in the journals. I therefore beg to send you the following details of a case in which I administered the anæsthetic: The patient was a female aged fifty-eight. The operation was for removal of a tumour of the face. Chloroform was administered by being dropped upon the outside of a cone formed by the corner of an unfolded towel, in the manner suggested by Sir Joseph Lister. The heart was examined before the operation and nothing abnormal detected. The patient was nervous and said she was afraid of the chloroform, but took it well. The operation was commenced and about ten minutes afterwards she vomited slightly; when that ceased she was again completely anæsthetised and her pulse and breathing were good and regular. About four or five minutes later she became suddenly pale, her pupils dilated widely and her pulse could not be felt (it was felt to be good almost immediately before and the cut vessels in the wound were spurting freely). She respired once or twice spontaneously before artificial respiration was commenced. After its commencement the pupils slightly contracted, but almost immediately dilated again. Nitrite of amyl and ammonia inhalations, hot sponges to the præcordium and injection of ether were also used without effect. Post mortem the heart was contracted and contained but little clot. The heart walls were not pale or markedly soft; the valves were slightly thickened at their free edges. Below the aortic valves and in the lower part of the aorta were some small patches of atheroma. The lungs were slightly emphysematous and had some scarring at the apices, but were otherwise healthy. There were some fibroid tumours of the uterus and the other abdominal organs were healthy. Death in this case appears to have been certainly due to heart failure, as the respiration continued after the imperceptibility of the pulse and change in aspect had been noted.—I am, Sirs, yours faithfully,

FRANK HINDS, M.D., B.Sc. Lond.,

Dec. 27th, 1892. Hon. Medical Officer to the Worthing Infirmary.

"COLOUR VISION."

To the Editors of THE LANCET.

SIRS,—In your last issue you publish a critique upon the report of the Committee of the Royal Society upon Colour Vision. In it you say: "The test to be used for colour vision are the wools of Holmgren, the sets to be approved by the central authority." You make no mention of my colour circle, which has been devised for making Holmgren's test more rapid and convenient and offers facilities for permanently registering the mistakes of those who are examined. The words of the committee's recommendations are (page 18): "The simplest efficient test is the wool test of Holmgren, applied either in the form which Holmgren recommends or in that of Jeaffreson." The report gives a good illustration of the instrument (p. 112) and further says (p. 19): "In

Jeaffreson's form of this test the handling of colours is avoided, the match being made as there described. The hesitation evinced by the colour blind in matching the test colours in this instrument is also of great utility to the examiner. Moreover, it has been found practically that as many or even more persons can be examined in a given time by it than by the original plan. The committee are therefore of opinion that this modification may be admitted if desired by the examiner." I write this letter not only in my own justification, but in that of Messrs. Curry and Paxton, who have gone to a good deal of trouble and expense in perfecting this apparatus.

I am, Sirs, yours faithfully,

C. S. JEAFFRESON, F.R.C.S. Eng.,

Senior Surgeon to the Northumberland, Durham and Newcastle Infirmary for Diseases of the Eye.

Dec. 22nd, 1892.

"ON THE DIAGNOSIS OF THE DIFFERENT FORMS OF PROSTATIC ENLARGEMENT."

To the Editors of THE LANCET.

SIRS,—Mr. McMunn is under a misapprehension. The instrument lent me did not in my hands fulfil the expectations I had formed. I therefore requested Messrs. Meyer and Meltzer to make me a urethrometer of the ordinary type adapted to the prostatic portion of the urethra, and I have never claimed or thought of claiming any originality in connexion with it. The best proof that the idea was not borrowed from Mr. McMunn is the trouble he has taken in his letter to show that the principle upon which the instrument is constructed is such a bad one.

I am, Sirs, yours truly,

C. MANSELL MOULLIN.

Wimpole-street, W., Dec. 28th, 1892.

"EXPERIMENTS ON LIVING ANIMALS."

To the Editors of THE LANCET.

SIRS,—Mr. Lawson Tait in endeavouring to maintain his dictum that the healthy peritoneum is extremely sensitive seeks refuge in a supposition that, although the healthy peritoneum of "animals" is insentient, the same membrane is, on the contrary, in man acutely sensitive. He appears in so doing to forget the fact that my letter was corroborative of surgical experience on the human peritoneum already expressed and published conversely to the supposition he now advances. The evidence from the laboratory is therefore in accord and not, as Mr. Tait alleges, in disaccord with observations upon man. From an experimental point of view the matter seems hardly debatable further. At present all Mr. Tait has done is to repeat an assertion, which, I would remind him, is not the same thing as to substantiate it. It will require time, he says, before he can verify the unqualified contradiction he gave to the statement in the recent lecture by Dr. Gee. Dr. Gee's statement has already received a twofold ratification in the medical press. Would it not have been a better course had Mr. Tait taken the time and trouble to verify his contradiction before instead of after making it?

I am, Sirs, yours faithfully,

C. S. SHERRINGTON, M.A., M.D.

St. George's-square, S.W., Dec. 24th, 1892.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Christmas and the Poor.

CHRISTMAS has come and gone with the usual festivities. A pleasing feature of the latter is the large amount of gifts in money and food—chiefly the latter—bestowed upon the deserving poor. The "hot pot" fund, which was originated some years ago, has become a hardy annual, and by its means a large number of families receive a substantial dinner of meat and potatoes. Generous tradespeople follow the good example with gifts of ten &c., and thus a large number of the hungry are fed with good things. It was all the more welcome this year, the weather having been before, during and after Christmas Day most unusually severe.

Death of Dr. Costine.

David Dunlop Costine, M.D. St. And., L.F.P.S. Glasg. L.S.A., died somewhat suddenly just as he had attained the age of sixty, his death occurring on the 23rd inst., his sixtieth birthday. The life of the deceased is an excellent illustration of what may be done by energy and perseverance. Coming from Scotland many years ago to Liverpool a perfect stranger, the deceased worked his way up step by step from a very humble position to a prominent place in the profession as well as in public life. He became a student at the Liverpool School of Medicine in 1860, and on the completion of his studies a few years later he commenced private practice in the north end of the city, a locality where a doctor was then much wanted. He soon acquired a large practice and became a member of the Everton Board of Guardians, taking also a prominent part in politics. It was mainly through his exertions that the Stanley Hospital was first completed and then enlarged; it continues to fulfil the purpose for which it was erected in a large and crowded district and will remain as a graceful monument to the memory of its founder. The funeral, which took place at St. James's cemetery on the 26th inst., was largely attended, in spite of the severe weather, by professional and private friends, representatives of the different public bodies and institutions to which the deceased belonged and of the general public. Dr. Costine was some years ago made a justice of the peace and on the day of his funeral references were made by the magistrates and the city coroner to his death and to the estimation in which he was held. He was married, and a son is in the profession.

A Man Frozen to Death.

The body of a tug boatman was found on the beach at the Dingle on the afternon of Christmas Day. He had evidently been frozen to death, the weather being bitterly cold with a strong south-east wind.

Hospital Sunday.

The second Sunday in the year was chosen from the first as that on which collections shall be made for the hospitals and other medical charities, the first Hospital Sunday having been held on Jan. 8th, 1871. By the usual coincidence of years, the twenty-second anniversary will take place on the same date next year. The committee, in their last annual report, lament the want of elasticity in the amounts of the church collections, and the lament is well founded. Starting under most unfavourable circumstances, and after surmounting almost superhuman difficulties the first year's collections exceeded by £700 the £4000 which the promoters of Hospital Sunday here had modestly predicted. The next year, 1872, the collections closely approached £8000, in 1873 this sum was exceeded, while in 1874 the collections considerably exceeded £10,000, the Hospital Saturday Fund amounting then only to a few hundreds, swelling the total to upwards of £11,000. Since then the tendency has been to stagnate or fluctuate; there has not been the continual steady rise which was hoped. But if Liverpool could raise nearly £11,000 in 1874, surely the amount in 1892 should be in excess of this sum. A sum should be fixed upon as the amount which ought to be raised, say £15,000, and every effort should be made to reach this.

Hospital Accommodation in Liverpool.

And this leads me to turn to the institutions for which Hospital Sunday and Saturday were established. In Liverpool hospitals have not kept pace with the increasing population as in many of the older towns and cities. Although Liverpool received its charter from King John it did not possess any medical charity till the middle of the eighteenth century, when the first infirmary was built. The Northern Hospital was not founded till 1834, or the Southern Hospital till 1841, each being urgently needed by the rapid growth of the town. Then in 1867 came the Stanley Hospital, thus completing four general hospitals for a population of nearly 600,000. In Dublin, with less than half this number, there are ten general hospitals. Though fairly well supplied with dispensaries and special hospitals these cannot be said to be excessive considering the population and its continued increase.

December 28th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Outbreaks of Small-pox.

SMALL-POX has appeared in various places in North Yorkshire and in parts of Durham. Cases are reported from Bedale and Weardale. As a rule these cases occur in the persons of

tramps and such-like wayfarers and are promptly isolated. More general attention is being paid to vaccination, re-vaccination and sanitary measures.

Tyne Port Sanitary Authority.

At the late meeting of the Tyne Port Sanitary Authority it was agreed to increase the salary of the medical officer from £80 to £100 per annum, and that a gratuity of £20 be further paid him on account of his extra services during the recent cholera scare, so-called. But the medical officer did more: he stayed up all night in the cholera hospital with a patient and remained with the man until he died. Never was a gratuity better deserved.

Sunderland Infirmary and its Convalescent Home at Harrogate.

An invitation given to the men of the various collieries which contribute to the Sunderland Infirmary to send representatives to the new home at Harrogate has been very freely accepted and must have a good effect on both charities. The more that working men can be induced to take a direct interest in all medical institutions the better for all concerned.

The Thirsk Railway Disaster.

The driver of the Scotch express on the morning of Nov. 2nd, when the fearful collision occurred at the Manor siding, near Thirsk, is reported to be able to sit up, and it is expected he will be able to leave the Lambert Memorial Hospital, Thirsk, this week and return to Gateshead, where he resides.

"The Human Frog."

A case which has excited a good deal of curiosity of a certain kind and was exhibited about Hartlepool and Stockton as a "human frog" was provided for by Drs. Gourley and Morison last week, when they made an order for the inspector in lunacy to take the so-called "frog" to the county asylum. The "frog" is a poor, decrepit imbecile, and it is said that he was sold by his father to a showman.

Bequests to Newcastle Charities.

The late Mr. Robert Daglish has left the following bequests to Newcastle charities: Royal Infirmary, £500; Newcastle Deaf and Dumb Asylum, £500; and to the Home of the Little Sisters of the Poor, £100.

Newcastle-on-Tyne, Dec. 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Meath Hospital, Dublin.

AT a recent meeting of the Standing Committee, the following resolution was passed unanimously: "That this committee, having heard of the resignation of Dr. Arthur Wynne Foot, senior physician to the hospital, on account of ill-health, feel they cannot let the opportunity pass without expressing their extreme regret at his severance from the medical staff after his long and faithful service. They sincerely trust that he may soon be restored to health, and be enabled to resume his many other professional duties."

Dublin Main Drainage Scheme.

A deputation representing the Main Drainage Committee of the Corporation of Dublin last week had an interview with the Chief Secretary and Colonel Le Mesurier (representing the War Office) for the purpose of explaining the views of the committee with reference to the objections to the scheme by the War Department. It appeared that the Main Drainage Scheme had been sanctioned by the Local Government Board, but that the War Office had objected to the construction of the proposed main outfall sewer at the Pigeon House Fort, on the ground that the health of the soldiers stationed at the Fort would be endangered in the event of that portion of the scheme being carried out. After some discussion it was eventually decided to communicate with the War Office authorities, setting forth what the Corporation were prepared to undertake, with a view to meeting the objections to the scheme and removing the obstacles which at present impede the progress of the work.

Richmond Hospital, Dublin.

By the will of the late Mr. Louis Higgins, a sum of £5000 has been left for charitable purposes, and the executors intend to devote the entire sum to the rebuilding of the Richmond Hospital, which is in a very bad condition. A further sum of £6000 is also forthcoming, and this £11,000 will be sufficient to rebuild the hospital.

Royal Hospital for Incurables.

The board have resolved to erect a second pavilion, containing two wards, which will provide accommodation for fifty-two beds.

Health of Dublin for November.

As compared with the previous month, there was a trifling increase in the mortality ascribed to typhoid fever. The deaths from diarrhœa decreased largely. One small-pox patient was admitted into Cork-street Fever Hospital from Blackrock. The death-rate was 27·1, and the zymotic death-rate was 1·8 per 1000 below the mean rate during the month of October for the previous ten years.

December 28th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

"Political Insanity."

IN the new edition of his book on forensic psycho-pathology Professor von Krafft-Ebing has added a new chapter on "political insanity," from which I quote the following: "In history and in our own time one comes upon large numbers of people who, discontented with social arrangements, feel called upon to better the world. There are innumerable such pseudo-geniuses in society, both in the harmless province of important inventions and proposals for the public good which prove in the light of criticism to be mere vain desires or Utopias. The clinical marks of these abnormally constituted persons are infinitely various. In many the mental endowment is weak and their intellectual productions bear the stamp of crazy eccentricity which clearly distinguishes them from those of genius. Many such remain all their lives in the stage of abnormal world-menders and pothouse politicians, but from the suggestions of others or the influence of excited times they are apt to lose the remnant of their discretion. Then they feel impelled to convert their ideas into action. They appear in the *rôle* of tribunes of the people, leaders of rebellions, founders of sects or political parties and plunge themselves and others into misfortune." Further on he says: "Such unfortunates fall at last into complete megalomania and if they obtain power for a time they use it in accordance with their degenerate natures as tyrants ..... If they are placed in lunatic asylums they regard their sequestration as actuated by envy and fear of their great talents and go on cultivating their 'ideas,' awaiting the time of their realisation. Their final fate is extreme megalomania, confusion, psychic debility."

Statistics of the Medical Profession.

The following statistics are taken from Dr. S. Guttmann's Medical Calendar of the German Empire. The number of medical men in Germany is 20,500. It has increased more than 21 per cent. during the last five years. The number of medical men in Prussia is 12,074, in Bavaria 2345, in Saxony 1533, in Baden 811, and in Würtemburg 711. The corresponding number in Berlin and its suburbs is 1636. The number of medical men in Germany per 10,000 inhabitants is 4·15. The number of dentists in Germany holding German diplomas is 828. The number of apothecaries' shops is 4964. The number of hospitals is estimated at 3109, with 185,069 beds—i.e., 37·44 beds per 10,000 inhabitants.

Cholera and Diphtheria.

At the December sitting of the Society for Public Hygiene Dr. Wernicke of the Hygienic Institute of Berlin University reported the results of his investigations of cholera and diphtheria bacilli. He has found that the pink reaction under sulphuric acid, is not so peculiar to cholera bacilli as has hitherto been thought. He maintains also that the danger of the transmission of cholera by tobacco is very small. Cholera bacilli die on tobacco leaves. He has succeeded in producing a very high degree of immunity against diphtheria in dogs by injecting weakened diphtheria cultivations. With the blood serum of such a dog he completely protected guinea-pigs against artificially produced diphtheria.

Cholera in Hamburg.

Between the 28th ult. and the 12th inst. only one case of cholera occurred in Hamburg, but about fifteen have been

reported since then, so that spring and summer are looked forward to with considerable anxiety.

Cholera Statistics.

It is now officially stated that the number of persons who died of cholera in Germany during the recent epidemic was 8510, of whom 7611 died in the City and State of Hamburg.

Louis Pasteur.

The Medical Section of the Institut de France has invited the Society for Internal Medicine here to take part through delegates in the celebration of Pasteur's seventieth birthday. The Society has elected Pasteur an honorary member.

Miscellaneous Items.

Dr. Baginsky of Berlin University has been promoted to the rank of Extraordinary Professor. — Surgeon-General Schaper, the new medical director of the Charité, entered on his office on the 14th inst.—Herr Köhler, Director of the Imperial Office of Health, is seriously ill.

December 26th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Austria-Hungary.

FRESH cholera cases have occurred during the last week in Galicia, near the Russian frontier. Single cases are reported from the town of Husiatyn and the villages Zalucze, Wierbowka and Siekierzynce in Galicia. It is stated that the cholera is raging severely in the adjacent port of Russian Podolia. At Budapest there are still nine cases of cholera at the cholera hospital and a case of cholera was stated to have occurred at Esseg in Crotia. It is feared by the sanitary authorities that the epidemic will spread in Austria and Hungary in next spring. At the last meeting of the Styrian Society of Physicians at Graz Professor Klemensiewicz announced that he had found a new method for staining the comma bacillus and that by this method the flagellum of the bacillus could be made visible, so that it could be easily distinguished from other similar bacteria. The researches on this matter, however, are not yet concluded.

Operation for Cataract.

Professor Fuchs of Vienna gave recently an interesting lecture on the methods of operating for cataract, in which he stated that the excellent results obtained by Professor Wecker of Paris with the old method of Daviel and Beer (who performed extraction without iridectomy) induced him to try the same method again at his clinic. Between May, 1890, and November, 1892, 1344 cases of cataract were operated upon—702 of them by Professor Fuchs himself and in 311 of these without iridectomy. The results were very favourable with the elder (Beer's) method, as only 0·9 per cent. of the cases were unsuccessful, while with the other method the percentage of non-success was 2·3.

Pasteur's Seventieth Birthday.

At the last meeting of the Vienna Society of Physicians it was resolved to present an address to M. Pasteur on his seventieth birthday.

Medical Provident Society.

A new medical society has been formed here for the aid of physicians who have become disabled or ill. The annual subscription is 30fl. (50s.). Three hundred members have joined the society.

December 26th.

Obituary.

WALTER HAYLE WALSHE, M.D. EDIN., F.R.C.P. LOND.

WALTER HAYLE WALSHE, the son of William Walshe, a barrister of great promise who died at the early age of forty-eight, was born in Dublin on March 19th, 1812. He entered Trinity College, Dublin, in 1827, and continued to the third year of study, but did not proceed to the degree of B.A. The intention up to this time had been that his profession should be that of a barrister-at-law; but he preferred another course, and in 1830 went to Paris, whither his mother had already gone with the idea of making her permanent residence in France. From advice then given by an old family friend, he in 1830 began the study of Oriental languages, commencing with Arabic, but after two years gave up the idea, to use his own expression, of "pushing himself in life as an Oriental linguist," although assured there was a "fine opening" in India for anyone who could attain even moderate skill in the use of three or four of the current tongues. To those who know Dr. Walshe's great classical learning, and his latest work on the "Colloquial Faculty for Languages," published in 1886, it may appear strange that one so highly gifted as he was in this particular direction, as well as in the mastery of language on its scientific side, should have relinquished this pursuit at that time and have commenced the apparently uncongenial study of medicine. This was in 1832, but at that time physical and biological science presented an immense attraction to young Walshe; and so he began, in October of that year, to attend the practice of Boyer and Roux at La Charité in Paris, and to dissect and follow other kindred studies in the same metropolis.

In the beginning of 1834 the most important event of his professional career occurred. It was then that he became acquainted with M. Louis, and the impetus given to his mind was intensified by his devoted study in the clinique of that physician at La Pitié; and thenceforward, until the end of his long life, he never swerved from the lines laid down and illustrated by his great master. The natural inborn bias of Dr. Walshe's mind was towards strict observation and inductive reasoning; and in the school of Louis this bias was so accentuated as to develop in him an equally potent "polar" repulsion in regard of imperfectly noted facts and *a priori* reasoning of all or any kind. The great teachers "at whose feet he sat," to use his own expression, and whom he specially remembered with gratitude and admiration, were Bérard, Orfila, Dumas, Cruveilhier, Andral, de Blainville, Dubois, Velpeau, Ricord and Marjolin. He was dresser to Dupuytren for some months and attended the extra-professional lectures of Michelet, Flourens and Arago among others. In 1835 he was elected a member of the Société Médicale d'Observation, being nominated by his friends and colleagues, Dr. Oliver Wendell Holmes and M. Valleix—M. Louis being president. In the August of the same year, 1835, Dr. Walshe left Paris for Edinburgh, and there became acquainted with his uncle, the Rev. R. O. Shannon of the Episcopal Chapel, York-place, who had for a long time been one of the most popular and socially prominent men in the "Modern Athens." To this intercourse Dr. Walshe often referred as being one of the great helps he had received in the cultivation of his literary taste. In 1836 he proceeded to the degree of M.D. in Edinburgh, and immediately after graduating returned to Paris M. Louis was kind in introducing him to a few English families, but Dr. Walshe felt that he was wasting time, and in 1838 came to England and commenced medical practice in a very humble manner in the north of London.

During the years 1839 and 1840 Dr. Walshe was a vigorous writer on pathology, contributing the articles on Cancer, Endosteitis, Cephalhæmatoma, Ectopia, Emphysema (surgical), Empyema and Thoracic Fistula to Costello's "Cyclopædia of Surgery"; and, but several years later, the very remarkable paper on Adventitious Products to Dr. Todd's "Cyclopædia of Anatomy and Physiology." The article on Cancer was written in 1840, and was the foundation of his important and quite classical work "On the Nature and Treatment of Cancer," published separately in 1846. In the preface to this book Dr. Walshe refers to the "flattering reception with which the article on Cancer in the 'Cyclopædia of Surgery' was honoured by the profession," and to the fact that in 1844 Dr. Mason Warren, of Boston, produced an American edition of it as a separate book. It was doubtless in consequence of the high distinction as a pathologist obtained by Dr. Walshe as the author of these masterly papers that the Council of University College in 1841 elected him, in succession to the late Sir R. Carswell, as their Professor of Morbid Anatomy, an office which he held during the following eight years, when he succeeded the late Dr. John Taylor as Special (Holme) Professor of Clinical Medicine. The duties of this office were those of minute personal instruction of the students in the wards of the hospital and the delivery of clinical lectures. Those were very high days in University College and its hospital. The colleagues of Dr. Walshe in the Faculty of Medicine were Lindley, Grant, Graham, Fownes, Quain, Sharpey, C. J. B. Williams, A. T. Thomson, Ellis, S. Cooper and Liston; while in the Faculty of Arts, in which he always took a most lively interest, were Augustus de Morgan, H. Malden, George Long, T. H. Key, R. Potter, R. G. Latham, Tom Taylor, Merlet, Creasy,

Donaldson, Hurwitz and many others. The active professional career of Dr. Walshe was so closely associated with the years of his connexion with University College from 1841 to 1862 that it would be well to complete this part of that history here rather than interpolate with it the various contributions made to literature in their chronological order. When in session 1846–47 Dr. Walshe became Special Professor of Clinical Medicine, he was elected physician to the hospital and as such continued until 1861–62, when, upon retirement from active duty, he was elected Consulting Physician and Emeritus Professor of Medicine and Clinical Medicine. In 1848, upon the resignation of Dr. C. J. B. Williams, Dr. Walshe was appointed Professor of the Principles and Practice of Medicine, an office which he held with great distinction and success during fourteen years. Throughout this time he delivered regularly most important "clinical" lectures, in addition to those of the "systematic course"; and it is by many of these, as well as by much systematic writing, that his work will be best remembered. In the three professorships he had filled he was succeeded by Sir William Jenner, and in mentioning this illustrious name it seems a fitting place in which to mention some others of his colleagues—viz., Edmund Parkes, Sir A. Garrod, C. J. Hare, Wilson Fox,* Maudsley,* Russell Reynolds,* J. E. Erichsen, John Marshall, Burdon-Sanderson, Alexander Williamson, George Harley, Grailly Hewitt,* Michael Foster,* Charlton Bastian,* Sir Henry Thompson* and Wharton Jones, while in the Faculty of Arts there were Farinelli, Croom Robertson, Masson, John Seeley, Hirst and others. These names[1] are selected from the large list of contemporary professors because, from the writer's personal knowledge, each of them entertained a very high regard for their distinguished colleague.

As a professor both in the "clinical" and "systematic" courses, it is difficult to imagine anyone more highly gifted than was Dr. Walshe. He was profoundly and accurately learned in the literature of every subject upon which he spoke and upon the cognate subjects of more specifically scientific processes which could throw any light upon his subject matter. He arranged all his work with the most rigidly logical precision; and every individual lecture furnished a separate and complete model of scientific carefulness. His method of representing facts was essentially "the numerical"; his mode of arriving at conclusions was "per viam exclusionis." He handled theories, bygone doctrines, present fancies and working hypotheses with equal ease; placed them either side by side, in sequence or face to face with facts as the need might be; brought out their value, often not fully seen before, or destroyed them with a relentless energy whenever they were fit only for destruction; and on those ten fingers, which seemed all alive with redundant energy, enumerated point by point achieved, until the members of his class used often to look at one another with an expression of amazement that what before had seemed so vast, so complicated, so obscure, so misrepresented, so hard and so well nigh impossible to understand, could be so robbed of showy clothes, stripped bare of all misconception and made so clear and simple as it now was by the apparently easily-used magic of their great teacher's mind. His language was well chosen, his delivery remarkably rapid, fluent, precise and yet easy to follow; he was often rhetorical, and when he chose highly eloquent, but in ordinary lectures he was instructive by his great learning, convincing by his vigorous logic, and fascinating by the beauty of his style and the obvious earnestness of his conviction.

At the bedside he was most precise and methodical, and gave all his powers to the accurate observation and record of facts. The history of each case was "taken" by his clinical clerks under the direction of his house physician, and this being read to him the "present state" was dictated by himself and taken down then and there in the ward-book. This was done always, and also in his own notes of private cases, according to the scheme drawn up by the "London Medical Society of Observation" (of which he was the founder) under the title of "What to Observe." The notes were long and elaborate as a rule, but sometimes they were amusingly short—e.g., after for many minutes endeavouring to ascertain from a somewhat confused man, who could articulate easily enough and apparently quite intentionally, but who could not put out his tongue although he said he could, Dr. Walshe summed up thus: "When asked if he can put out his tongue says he can, but he can't"—a terse phrase, the last six words of which became a favourite expression among some members of his class to describe other conditions where performance did not equal promise. It may be true that sometimes Dr. Walshe's protracted investigation may have proved tiring to a patient or to some so-called "students" who were trying to "catch" a knowledge of medicine as they might perchance have caught measles in the ward, but the patient was always handled with such kindness and delicate consideration by the master that the common impression was one of gratitude for his abundant care, while the earnest worker was always sorry when the last word was utttered and only because there were no more to follow. During this period of constant activity in teaching Dr. Walshe was physician also to the Brompton Hospital for Diseases of the Chest and wrote largely on scientific and practical subjects, with marked learning, skill and acceptance. He translated a "Course of Lectures on the Blood," by Magendie, which were published in THE LANCET, and also the immortal work of Louis, his "Researches on Phthisis." This was brought out in 1844 by the Sydenham Society. In the *British and Foreign Medico-Chirurgical Review* he wrote many critical articles and original papers; one of these is or ought to be familiar to every earnest student—viz., the Report produced in 1849 on Pulmonary Phthisis as observed at the Hospital for Consumption. It is based entirely upon facts recorded statistically, with some forty-four propositions arrived at by strict induction. The most generally interesting of these conclusions and perhaps the most unexpected were those which related to the heredity of phthisis and the laws of hæmoptysis. His small but at the same time exhaustive book on the "Physical Diagnosis of Diseases of the Lungs," published in 1843, was the text-book for students not only in University College but in the other schools of the metropolis. Nothing so compact, so well informed or so precise had appeared before, and although it was expanded afterwards into a much larger book, containing many other aims, it yet remains as a model of condensed knowledge and of perspicacity in its application. His treatise on "Diseases of the Lungs," which grew out of the smaller book just mentioned, has passed into its fourth edition, the last being carefully revised and enriched by the author in 1875. This work has been translated into French and Danish. His other equally important work on "Diseases of the Heart and Great Vessels" also passed to its fourth edition in 1873, and has been deservedly held to be one of the most careful and elaborate epitomes of knowledge on the matters with which it deals.

But Dr. Walshe did much more than these things. He published a "Course of Clinical Lectures," and contributed largely to the journals of the day. He was one of the earliest to furnish an account of "Movable Kidney," 1843, while in 1849 he wrote a remarkable paper in the *Medical Times* on the Logical Application of Physiology to Pathology. In 1862, at the meeting of the British Medical Association in London, he delivered the Address in Medicine, which certainly is one of the ablest among the many very able addresses with which that Association has been honoured. Especial attention should be paid to the very lucid and eloquent passages in which the author, as a scientific witness, throws back upon the legal profession a *tu quoque* reply to the charge of "differences among doctors," as though this were a specialty of their profession. In 1871 he produced a paper in THE LANCET on the fallacy of supposing that "bad health" increases the tendency to catch "acute specific fevers," and other contributions on allied questions teemed from his polished pen. At this time, too, his consulting practice was very large, and he was often seen in courts of law in the great cases of disputed testamentary capacity or of claims for compensation in cases of railway accident. His early legal training made him a most careful and effective witness. In his separately published books and in his numerous lectures and contributions to journals, these things may be fairly said as indications of his originality. He was the first to detail accurately the anatomy of cephalhæmatoma and of movable kidney. He was very early in pointing out the influence of existing diathetic diseases on the course of acute specific diseases—e.g., Bright's disease on typhoid fever &c. He was an early, if not the first, exponent of the idea that Bright's disease was not a disease of the kidney but of the blood primarily,[2] a view now so fully illustrated by the

[1] Those distinguished by an asterisk were previously pupils of Dr. Walshe.

[2] THE LANCET, 1849.

late Drs. Basham, Wilson Fox and others that it is really hard to believe how original the idea seemed at the time of its enunciation. He was very strongly of opinion that "the pitch of tone" elicited by percussion was the governing factor in estimating the value of variations in dulness. This may not possibly be so evident to some physicians as it was to the author, whose ear was attuned to the very finest modifications of sound; but the writer, who has made hundreds of observations on this point with Dr. Walshe many years ago is quite sure that the value was not over-estimated by him. As some people are colour-blind more or less, so others have a very indifferent appreciation of changes in the "pitch" of note.

Dr. Walshe was the first to teach in this country the fact of contracted pupil in aneurysm of the arch of the aorta and also the occurrence of sudden death in aortic reflux. These points are fully discussed by him in the fourth edition of his work on Diseases of the Heart and Great Vessels. Dr. Walshe was a Fellow of the Royal College of Physicians of London and LL.D. of Edinburgh, a member of the Medical Society of Observation of Paris, of the Medical Society of Copenhagen, of the Royal Medical Society of Athens and of other learned bodies. The most recent works of Dr. Walshe have been outside medical literature, but both of them have shown wide and accurate knowledge of all the biological principles involved in their curiously interesting and instructive pages. That on "Dramatic Singing Physiologically Estimated" affords a striking illustration of the manner and degree to which a highly cultured physician might find time not only to enjoy but to analyse all the elements that contributed to his enjoyment, and by vast acquaintance with the subject of which he treats to criticise in detail every factor in the production of the musical effects to which he listened. There are few, we think, who could carry out an analysis such as his in the field he has chosen; but still fewer who could, by any possibility, have had either the opportunities he enjoyed or the faculty for understanding what it was he enjoyed, as well as the capacity for its expression. The second book, on "The Colloquial Faculty for Language," with an essay on "The Nature of Genius," is of quite exceptional ability and interest to the scientific biologist and the general reader. To read its pages is to find oneself in companionship with a man of high culture and scientific aim. Dr. Walshe's reading was very wide and exceptionally accurate, and many of his most striking personal qualities are charmingly displayed in this choice and learned work. Pages after pages are full of thoughts and suggestions of recondite or inviting subjects he has left the reader to follow, as his bent may lead him, but all of them convey to the mind the feeling that a great master has passed away and, take him "for all in all, we shall not look upon his like again."

As a physician and consultant Dr. Walshe showed always a fineness of kindly consideration for his patient and his colleague—an outcome of his strong gentleman-like feeling and marked courtesy of manner. To the frankness of his manner, so well known in those of Irish origin, Dr. Walshe added the lustre conferred by a Parisian education and extended travel in the best society. His conversation was enriched by epigram and anecdote and great humour. His acquaintances were many, his intimate personal friends were few; but those who had the advantage of being within that circle always found in him perfect consideration, unfaltering and devoted kindness and affectionate personal regard. He was by nature both sceptical and cynical, but to what he did believe he clung with all his energy, and where he did trust he trusted utterly.

To conclude as we began with personal history, Dr. Walshe married, twenty-four years ago, Caroline Ellen, the youngest daughter of the late Rev. D. Baker, Vicar of Bishop's Tawton, and sister of General Sir Thomas Baker, Quartermaster-General of the Forces, by whom he leaves one son, now in his twenty-second year, and who, having just passed his "Responsions," is to follow out his own career in Oxford. Some years ago Dr. Walshe expressed to the writer a wish, recently repeated and enforced in a letter directed to be delivered immediately after his death, to the effect how greatly he desired it might be known "how deeply mortified he was by his inability to mix professionally and socially with his colleagues." The "wretched state of his health was the sole but most effective cause of his life of isolation." For years he had "been practically confined to his own fireside not only in the evenings but even in the daytime." This the writer knows to be absolutely true, and knows also that the isolation, in spite of occasional periods of active practice, dates back for more than twenty years, and was a great source of grief to his old master and friend; Dr. Walshe keenly feared that his former colleagues and associates might think his interest in old studies and pursuits had failed, but it was not really so. To almost the last he retained all his brilliant faculties, and intense interest in pathology and practical medicine, and also in the affairs and ethics of his profession. He was however compelled by painful disease to retire from all the scenes and discussions that would have interested him most deeply, and in which the participators would have found in him a wise and most accomplished adviser, had the discussions been in the Societies, the schools, the councils of his profession, the Colleges or the University. In his charming book on "Dramatic Singing," after quoting Herbert Spencer's homage to the emotional power of the art, couched in the following words: "Music arouses dormant sentiments of which we had not conceived the possibility, and do not know the meaning," Walshe continues, "Spell-bound, in truth, we muse in vague indefinite dreams of something beyond and above this nether world, as melody and harmony of the higher moulds enthrall the auditory sense; in fact a something yet deeper than the shadowing forth or the idealisation of the most trivial and of the deepest emotions, the subtlest and the most refined sentiments, the tenderest and the deepest passions." Feelings and yearnings such as are here expressed are not infrequent in his other writings, nor were they so in his conversation. His was the "Honest Doubt," in which "Faith" lives; although at times its breathing may be faint. He thirsted for perfect knowledge with a passionate longing, and sought no less earnestly for higher light. With Goethe he might say, as we know he often felt, and especially of late,

> **Und mich ergreift ein längst entwöhntes Sehnen**
> **Nach jenem stillen, ernsten Geisterreich.**

And we now, putting all the shadows of life behind us by turning to the light, must feel that such a soul—so fully attuned to every note of melody and every chord of harmony—must, released from its painful tenement in this "nether world," find the reality of its highest aspirations in an exalted condition of existence in some "higher world" of which the philosopher, as such can but "dream."

Sir William Jenner writes: "Many years since I attended Dr. Walshe's lectures on Morbid Anatomy and never heard a more able or clearer lecturer in my life. I followed him in the hospital and he was a first-rate clinical teacher. I heard him deliver an introductory lecture at University College, remarkable for its eloquence and for its soundness. He had left such a strong impression on my mind and I thought so highly of him that when I had the honour to be President of the Royal College of Physicians I wrote to him asking him to deliver the Harveian Oration. Although he at first consented, circumstances soon after prevented him from delivering it."

The following remarks are by a younger contemporary of Dr. Walshe well entitled to speak of his great qualities as a medical teacher and as a physician: "I first made acquaintance with him when he was appointed to the chair at University College by attending his clinique. What the men who talked about him at that time used to say was that 'he had all the characteristics of an Irishman educated in Paris.' He had all an Irish gentleman's geniality and I do not think I ever knew a man who exhibited a more delicate regard for the susceptibilities of all he came into relation with or a finer tact in apprehending them. He was a charming companion largely for these reasons. As a teacher at the bedside he was unsurpassed, and the appreciation of this bedside teaching (after all, the most useful and impressive) was shown by the large numbers of men that accompanied him through the wards at his visits. They all knew perfectly well that they would not come away without very valuable additions to their practical knowledge of disease. But above all, in the wards he was a *trainer*. He recognised this as a most important part of his work at the hospital; he taught the men to be methodical in their diagnosis, never to my recollection quitting the bedside of a fresh case until he had made clear to everyone about him each step that he mentally had taken to arrive at the final view he had adopted. Spreading out the fingers of his hand, I have often seen him in a difficult or obscure case dotting off one by one more or less similar diseases and explaining why one after the other was to be rejected—in fact, teaching the men at the place where they must be most receptive of such teaching the

application of what has been called the '*via exclusionis.*' My intercourse with him became renewed in 1852. In that year he began to bring together a few selected men who met periodically at his house under the title of the 'London Medical Society of Observation.' It commenced with somewhere about a dozen men, of whom I recollect Jenner, Sieveking, Hare, Edmund Parkes, Snow Beck, Hermann Weber, Russell Reynolds, Lionel Beale and Morris, besides myself. It never became anything more than a private society of medical workers and never came before the medical public but once, when it put forth a little book, 'What to Observe at the Bedside and after Death in Medical Cases.' It was, as stated in the preface to the volume, 'a form of arrangement of symptoms and after-death appearances which had been framed by Dr. Walshe' and adopted with some modification by the Society. It passed through two editions. How the Society came to an end or what became of its records I cannot tell."

DR. GIACOMO RICCHETTI.

VENICE has lost one of her ablest physicians and busiest consultants in Dr. Giacomo Ricchetti, who was found dead in bed on the morning of the 23rd inst. The night before he had retired to rest at the usual hour and seemingly in his usual health. To his servant's customary knock at 7 A.M. next morning no answer was returned, till, on his room being entered, he was seen to be lying as if in sleep. His colleague, Dr. Orazio Pinelli, arrived shortly after, to find him dead from cardiac failure. Dr. Ricchetti was but in his sixtieth year, with apparently a long term of active life before him. He was an exceedingly well trained and pleasant-mannered practitioner and had won great confidence among the Venetian aristocracy and the foreign, particularly the British, residents or visitors in the "Pearl of the Adriatic." By birth he was a native of Gorizia, in the so-called "Italia Irredenta," but like others of his compatriots had become completely naturalised in the city of his adoption—"Italianissimo" (Italian of the Italians).

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.D. Examination :—

Medicine.—Horatio George Adamson, St. Bartholomew's Hospital; Wm. Henry Allchin, Westminster Hospital; Launcelot William Andrews and Harold William C. Austen, B.S., St Bartholomew's Hospital; Sir H. Reeve Beevor, Bart., King's College; Letitia Caroline Bernard and Frances May D. Berry, London School of Medicine and Royal Free Hospital; Richard Oxley Bowman, Manchester Royal Infirmary; David Brown, B.Sc., London Hospital; Lewis Thos. Fraser Bryett King's College; G. S. Buchanan, B.S., B.Sc., St. Bartholomew's Hospital; Arthur Wm. Burrell, London Hospital; Frank Geo. Bushnell, University College; Henry Albert Caley,* St. Mary's Hospital; Julius St. Thomas Clarke, Guy's Hospital; Charles Coles (Gold Medal), St. Bartholomew's Hospital; Walter Stacy Colman, University of Edinburgh and University College, London; Samuel Bird Cook, St. Thomas's Hospital; George Harry Cooke, Owens College and Manchester Royal Infirmary; Harry Corner London Hospital; Henry Jones Curtis, B.Sc., Philip Rasleigh Dodwell,* and Douglas Drew, B.S., University College; Henry Holdrich Fisher, St. Bartholomew's Hospital; Arthur Edwd. Giles,* B.Sc., Owens College; Douglas Richard Green, B.S., and Augustine Griffith, University College; Richard Tanner Hewlett, King's College; Thomas Walter Hinds, University College; Aubrey Dallas P. Hodges, London Hospital; Herbert Horrocks, B.Sc., Owens College and Manchester Royal Infirmary; Edward Victor Hugo, B.S., St. Bartholomew's Hospital; Walter Ross Jordan, Queen's and Mason Colleges, Birmingham; Alfred A. Kanthack, B.S., B.A., B.Sc., Liverpool Royal Infirmary, St. Bartholomew's Hospital and University of Cambridge; Henry Brunton Kitchen and Ronald Edward S. Krohn, University College; Arnold William W. Lea, B.S., Priestley Leech, B.S., and Jas. S. McGowan, B.S., B.Sc., Owens College and Manchester Royal Infirmary; Joseph Johnston Macgregor, St. Bartholomew's Hospital, Charles Pye Oliver, Charing-cross Hospital; John Ernest Paul, University College; Hugh Jas Moore Playfair, King's College; Harold M. Richards,* B.S., University College; R. Walter Richards and Llewellyn Roberts, St. Bartholomew's Hospital; Richard Gundry Rows, University College; Ernest Alfred Sadler, Birmingham Medical School; Henry Shaw-man, University College; Gerald A. Simmons, B.S., St Mary's Hospital; Ernest Newlyn Smith, University College, Cecil Robert Stevens, B.S., St. Bartholomew's Hospital; Thomas Geo. Stevens, B.S., Guy's Hospital; William Mitchell Stevens, *University College; William Francis Umney, St. Thomas's Hospital; John Wilkie, B.Sc., St. Bartholomew's Hospital; John Price Williams, Owens College and Manchester Royal Infirmary; Arthur S. Wohlmann, B.S., Guy's Hospital; Emily Elizabeth Wood, London School of Medicine and Royal Free Hospital; Thomas Jason Wood, University College.

State Medicine.—Arthur E. Fernewan, M.D., University College; Richard Sisley, M.D., St. George's, Guy's, University College, and Vienna; Theodore Thomson, Universities of Aberdeen and Edinburgh; Frank Tratman, Bristol and London Hospital.

The following candidates were successful at the recent M.B. Examination for Honours :—

Medicine.

First Class.—Seymour Graves Toller (Scholarship and Gold Medal), St. Thomas's Hospital; Arthur Mantell Daldy (Gold Medal), Guy's Hospital; Hamilton Ashley Ballance*, University College; Louisa B. Aldrich-Blake, London School of Medicine and Royal Free Hosp.; Charles Caldwell Elliott, Guy's Hospital; Hugh Roubiliac Smith, University College; Chas. Richard Box, B.Sc., St. Thomas's Hosp.; Ed. T. E. Hamilton, B.Sc., Guy's Hospital; Martin Randall, B.A., University College.

Second Class.—Jessie Flewitt Hatch, London School of Medicine for Women, and Leonard Rogers, St. Mary's Hospital (equal); William Bigh, Guy's Hospital, Wm. Prior Purvis, B.Sc., St. Thomas's Hospital, and Henry Stephen Sandifer, King's College (equal); Arthur John Sharp, Guy's Hospital; Thos. Grigor Brodie, King's College, Clement M. Rogerson, Yorkshire College and General Infirmary, Leeds, and Chas. Geo. Spencer, University College (equal); Francis Jordan Coleman, Guy's Hospital, John Evans, University Colleges, Liverpool and London, and Chas. S. Pantin, Guy's Hospital (equal).

Third Class.—Cecil Benjamin T. Musgrave, University College, and Frank Allan Roberts, Yorkshire College (equal); A. Seal Blackwell, B.Sc., St. Bartholomew's Hospital, and G. Arbour Stephens, B.Sc., University College (equal); Arthur Douglas Heath, University College, and Herbert Ramsden, Owens College (equal).

Obstetric Medicine.

First Class.—Seymour Graves Toller (Scholarship and Gold Medal), St. Thomas's Hospital; Jessie Flewitt Hatch (Gold Medal), London School of Medicine for Women; Louisa B. Aldrich-Blake, London School of Medicine and Royal Free Hospital; Hamilton A. Ballance University College; Arthur M. Daldy, Guy's Hospital.

Second Class.—Thos. Major Tibbette, Queen's College, Birmingham; Thos Grigor Brodie, King's College; Chas. Satchell Pantin, Guy's Hospital; Herbert Ramsden, Owens College; T. Robinson Taylor, B.Sc., Guy's Hospital; Arthur Seal Blackwell, B. Bartholomew's Hospital; Richard Hamilton, Owens Coll and Manchester Royal Infirmary, and Wm. Black Jones, St. Bartholomew's Hosp. (equal); Wm. Prior Purvis, St. Thomas's Hospital.

Third Class.—Leonard Rogers and Vincent Warren Low, St. Mary's Hospital; Chas. Richard Box, St. Thomas's Hospital, and Walter L. Pethybridge, B.Sc., St. Bartholomew's Hosp. (equal); Chas. George Spencer, University College; Henry Stephen Sandifer, King's College.

Forensic Medicine

First Class.—Charles E. Wheeler, B.Sc. (Gold Medal), St. Bartholomew's Hospital; John Jones, University College; Arthur J. Sharp, Guy's Hospital.

Second Class.—Edward Thos. Ernest Hamilton, Guy's Hospital; Christopher Addison, St. Bartholomew's Hospital; Tom Robinson Taylor, Guy's Hospital.

Third Class.—Arthur Seal Blackwell, St. Bartholomew's Hospital; Thomas Grigor Brodie, King's College; Wm. Prior Purvis, St. Thomas's Hospital; Chas. Geo Spencer, University College.

* Obtained the number of marks qualifying for a Gold Medal.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated :—

Surgery.—R. H. Calvert, Leeds Yorkshire College; H. S. Chavasse and H. W. Clarke, St. Mary's Hospital; B. S. Foulds and F. J. Godwin, Charing Cross Hospital; F. Henry, St. Bartholomew's Hospital; G. M. Hetherington, King's College Hospital; G. Higginson, Cambridge University and London Hospital; J. Joule and J. Kennedy, London Hospital; E. G. G. Little, St. George's Hospital; G. Martyn, King's College Hospital; F. S. Park, Edinburgh; E. Le F. Payne and W. F. Peacock, St. Mary's Hospital; A. L. Roper, Cambridge University and Guy's Hospital; S. Smith, Middlesex Hospital; T. E. Smurthwaite, St. Mary's Hospital; A. B. Sturges, Yorkshire College, Leeds; J. M. Swanson and S. W. Thompson, Charing Cross Hospital; J. A. T. White, St. Bartholomew's Hospital; F. D. Woolley, Owens College, Manchester.

Medicine, Forensic Medicine and Midwifery.—R. S. Berry, St. George's Hospital; H. H. P. Cotton, Westminster Hospital; F. C. B. Harvey, Sheffield Hospital; A. N. V. Johnson, Royal Free Hospital; A. G. Jones, Middlesex Hospital; A. S. Knapman, Owens College, Manchester; L. P. Tomlinson, St. George's Hospital; R. B. Williams, St. Thomas's Hospital.

Medicine and Forensic Medicine.—H. F. Ealand, St. Mary's Hospital; T. M. Nair, Madras and St. Mary's Hospital; F. S. Park, Liverpool and Edinburgh.

Medicine and Midwifery.—R. Evans, University College.

Forensic Medicine.—R. S. Fairbank, King's College; J. H. Roberts, Guy's Hospital; A. Robinson, Leeds Yorkshire College; H. A. Walker, Owens College, Manchester; W. R. Willey, St. Mary's Hospital.

Midwifery.—G. L. Godwin, Edinburgh.

The following candidates received the diploma of the Society entitling them to practise Medicine, Surgery and Midwifery :—

Messrs. Berry, Calvert, Foulds, Henry, Joule, Little, Martyn, Payne, Peacock, Roper, Robertson, Smith, Swanson, Thompson, Tomlinson, White, Willey and Williams.

PRESENTATIONS.—Mr. Peter Galloway of Rhynie, Aberdeenshire, has been presented with a handsome pianoforte, accompanied by a large piece of silver plate, on the occasion of his marriage. Professional duties deprived Mr. Galloway of the pleasurable opportunity of receiving the testimonial in person, and in his absence the duty of receiving the gift devolved on his bride, whilst its acknowledgment was made on his behalf by a friend present.—Mr. H. F. Devis, L.R.C.P. Lond., M.R.C.S., of Bristol, has been the recipient, on the occasion of his marriage, of a handsome marble clock, from the members of the Knowle Football Club, as a token of respect and friendship.

THE NEW LANCASTER INFIRMARY.—The Mayor of Lancaster (Alderman Kitchen) has intimated his intention of subscribing £5000 towards the cost of the new infirmary.

SELLING DISEASED MEAT. — The Blackburn bench of magistrates has recognised in a special manner the gravity of the offence of selling diseased meat by inflicting on a butcher a fine of £50 and costs. The evidence went to show that the meat was derived from a cow which had died of fever.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARON, B J., M.B., C.M. Edin., has been appointed Physician to the Throat and Nose Department, Bristol General Hospital.

BELL, C. W. J., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Yarborough Sanitary District of the Louth Union.

BRANNIGAN, H. C., M.D., M.Ch. Irel., L.R.C.P. Edin., has been appointed Medical Officer at Mount Morgan, Queensland, vice Hunter, resigned.

CLARKE, J. M., M.B. Camb., M R C.P., M R C.S , has been appointed Physician to the B is ol General Hospital, vice Baron.

FRASER, A. R., M.B., C.M. Edin., has been appointed House Surgeon to the Northern Infirmary, Inverness.

GRANT, NORMAN MCKAY, M D , Kingston, Ont., Canada, has been appointed a Public Vaccinator for the District of Waiapu, New Zealand.

GRAY, THOS., Ch.M Edin., has been appointed Assistant Medical Inspector to the Board of Health, Victoria, Australia.

HARE, F. W. E., M.D. Durh , M.R.C.S., has been appointed Senior Resident Medical Officer to the Charters Towers Hospital, Queensland.

HIGGINS, T J., M.D. Irel., L R.C.S , L.M. Edin , has been reappointed Medical Officer for the Welton Sanitary District of the Louth Union.

HENDERSON, J. L., M.B Melb , has been appointed Assistant Resident Medical Officer to the Children's Hospital, Carlton, Melbourne, Australia.

HALAHAN, S. H., M.B., B.Ch. Dubl., has been appointed Health Officer for Kowree Shire, Victoria, Australia.

HAYMAN, F. D., M.R C.S , has been appointed Health Officer for Winchelsea Shire, Victoria, Australia.

HOWLIN, A. J , L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the London County Council Industrial School, Mayford, Surrey.

HUTTON, J. R., M.B., Ch.M. Edin, has been appointed Resident Surgeon to the Castlemaine Hospital, Victoria, Australia.

ICK THOS. E , M.B Melb , has been appointed Health Officer for Poowong and Jeetho Shire, Victoria, Australia.

JOHNSTON, ALEX , M.D., has been appointed Physician Superintendent to the City of Glasgow Fever Hospital, Belvidere, vice Allan, resigned.

KENNY, WILLIAM, M B., Ch.B Melb , has been appointed Assistan Resident Medical Officer to the Children's Hospital, Carlton, Melbourne, Australia.

KERR, JAMES. M.B , C.M Edin., has been appointed Health Officer for Croajingolong Shire, Victoria, Australia.

LANCASTER, E. LE CRONIER, M B., B.Ch., M.R C.S., has been appointed Medical Officer, Swansea Hospital.

LANGDON, J. A., L.R.C.P. Edin., L F.P.S. Glasg., has been appointed Medical Officer to Warangesda Mission Station, New South Wales.

LOXTON, W. A., L R C.P. Lond., M R.C.S., has been appointed Honorary Assistant Surgeon to the Skin and Lock Hospital, Birmingham.

LINDSAY, HERBERT S , M.R.C.S., L.R.C.P. Lond , has been appointed a Government Medical Officer at Muttaburra, Queensland, vice Egan, resigned.

LLOYD, FREDK GEO , M R.C.S., L R C.P. Lond , has been appointed Assistant House Physician to the West London Hospital.

LUSH, PERCY J. F , M.A., M.B., B.Ch. Oxon, M.R.C.S., has been appointed Medical Officer for Friedenheim, Upper Avenue road, Swiss Cottage, N.W.

MASON, S. R., M D., F.R.C.S. Irel., has been appointed Consulting Surgeon to the Coombe Lying-in Hospital and Guinness Dispensary, Dublin.

MOIR, WILLIAM. M.B., Ch M. Aberd., has been appointed Health Officer for Morwell Shire, Victoria, Australia.

PARKER, GEO , M D. Camb , M.R.C.S., has been appointed Assistant Physician to the Bristol General Hospital, vice Clarke.

PAIRMAN, T. W., L.R.C.P , L.R.C.S. Edin., has been appointed a Public Vaccinator for the District of Te Awamutu (prov. Auckland), New Zealand.

PEARCE, H. R. H., L R C.P., L.M Irel. has been appointed Medical Officer to the Nymagee Hospital, New South Wales.

POGGIOLI, V., M.D. Bologna, has been appointed Medical Officer to the Peak Hill Hospital and Miners' Association, New South Wales.

RANKIN, R. P , L R C.P., L R C.S. Edin., has been appointed Public Vaccinator for Dookie Victoria, Australia.

REID, G. M., M.D. Edin., L.R.C.P. Lond , M.R.C.S., has been appointed Health Officer for Chewton Borough, Victoria Australia.

RIGBY, W H , M.B Melb , has been appointed a Public Vaccinator for Coleraine, Victoria, Australia.

ROBERTSON, G. M., M B., C.M., M.R.C.P. Edin., has been appointed Medical Superintendent to the Murthly District Asylum.

ROWLING, C. E , L.R.C P Edin., C M., M.R C S., has been appointed a Public Vaccinator for the District of Paterson, New South Wales.

SALTER, A. E., M B., Ch.B. Melb., has been appointed Medical Officer for the Lepers detained in the Lazarette on Friday Island, Queensland.

SIBLEY, W. KNOWSLEY, M.A., M.D., B.C , M.R.C.P., has been appointed Clinical Assistant to the Skin Department, Middlesex Hospital.

WESTENRA, F. G., M B , C.M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed an additional Public Vaccinator for the District of Hawera, New Zealand.

WILLIAMS, E. J., L.R.C.P , L.R.C.S. Edin., L.M.R.C.P. Irel., has been appointed Surgeon in the Naval Brigade, Victoria, Australia.

WILLIAMS, W., M.A., M.B., B.S., D.P.H. Oxon., M.R.C.S., F.C.S., has been appointed County Medical Officer to the Glamorgan County Council.

WRIGHT, F. G., L.R.C.P., C.M., L.R C.S Edin., has been appointed a Public Vaccinator for Serviceton, Victoria, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ALNWICK INFIRMARY.—House Surgeon (unmarried). Salary £120 per annum, with furnished apartments, attendance, coals and gas, but without board.

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50 with board and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals and lights provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. House Physicians.

KENSINGTON DISPENSARY —Honorary Medical Officer. (Applications to the Hon Secretary, 7, Stamford-road, Kensington-square, W.)

KING'S COLLEGE, London.—Assistant Physicians.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Fever Hospital at Monsall, for twelve months. Remuneration £250 per annum, with board and residence.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich, S.E.—Junior Resident Medical Officer, for six months. Salary £30 per annum, with board, attendance and washing.

NATIONAL HOSPITAL FOR THE PARALYSED (ALBANY MEMORIAL), Queen-square, Bloomsbury. — Senior House Physician. Salary £100 per annum.

ST. GEORGE'S HOSPITAL.—Visiting Apothecary.

THE METROPOLITAN ASYLUMS BOARD.—Medical Superintendent at the Darenth Schools for Imbeciles, near Dartford, Kent. Salary £450 per annum, with furnished residence, coals, gas, milk, garden produce and washing. (Applications to the Clerk of the Board, Chief Offices, No folk street, Strand, W.C.)

THE VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon to the In-patients. Honorarium of £50 per annum, and board and lodging provided in the hospital.

THE VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Physician to the In-patients. Honorarium of £50 per annum, and board and lodging provided in the hospital.

WEST HERTS INFIRMARY, Hemel Hempstead.—House Surgeon and Dispenser, who shall also be Assistant Secretary, for two years. Salary £100 per annum, with board, furnished rooms, free light, attendance and washing.

Births, Marriages and Deaths.

BIRTHS.

MAUGHAN.—On Christmas Day, at Albany-street, N.W., the wife of James Maughan M D. Brux., of a daughter.

MILTON.—On Dec. 13th, at Cairo, the wife of Herbert Milton, M R.C.S., of a son.

TRACEY.—On Dec. 24th, at Eversley, The Grange, Wimbledon, Surrey, the wife of H. Eugene Tracey, M.B., of a daughter.

MARRIAGES.

ENTHOVEN—RUDALL.—On Oct. 12th, at St. Paul's Cathedral, Melbourne, Australia, by the Rev. Canon Handfield, assisted by the Rev. J. G. Swan, Elias James, third son of John Enthoven, of Harrow-on-the-Hill, England, to Anna Georgiana, only surviving daughter of James T. Rudall, F.R.C.S., of Spring-street, Melbourne.

FLEMMING—WOOD.—On Dec 28th, at St. John's Church, Upper Holloway, by the Rev. G. Hemming, Percy Flemming, M.D., B.S., F R.C.S., son of the late Horatio Henry Flemming, of 35, Regent's-park road, N.W., to Emily Elizabeth Wood, M.D., daughter of Arthur John Wood, of 267, Camden-road, N., and 1, Hare-court, Temple, E.C.

OWEN—O'NEILL.—On Nov. 26th, 1892, at St. Michael's Church, Colombo, Ceylon, by the Rev. J. C. Ford, M.A., Arthur Deaker Owen, M.R.C.S., of the Perak Government Service, Straits Settlements, to Katharine, eldest daughter of Major Edward O'Neill, Teignmouth, S. Devon.

THOMPSON—STAINTHORPE.—On Dec 15th, at St. Andrew's Parish Church, Newcastle-on-Tyne, by licence, by the Rev. Canon Lister, M.A., James, son of the late John Thompson, of Annan, Dumfriesshire, to Emily Ann, second daughter of Dr. G. F. Stainthorpe, 26, Eldon-square. No cards.

DEATHS.

FOX.—On Dec. 24th, at the Vineyards, Bath, Edwin Churchill Pigott Fox, M.B. Edin., aged 50

GODWIN.—On Dec. 23rd, at Rawal Pindi, India, Surgeon-Colonel C. H. Y. Godwin, Principal Medical Officer, Rawal Pindi Division, late Professor of Military Surgery, Army Medical School, Netley, aged 54.
HESS.—On Dec. 22nd, Augustus Hess, M.D., M.R.C.P. Lond., aged 75.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

BOOKS ETC. RECEIVED.

ADLARD & SON, Bartholomew's-close, London.
The Calendar of the Royal Veterinary College for 1892. pp. 138. Price 1s.

BAILLIÈRE, TINDALL & COX, London; LEA BROTHERS & Co., Philadelphia.
The Principles of Theoretical Chemistry. By Ira Remsen. Fourth Edition. 1893. pp. 322.

CASSELL PUBLISHING Co., New York.
Hydrotherapy at Saratoga. A Treatise on Natural Mineral Waters. By J. A. Irwin, M.D. Irel. pp. 270.

CHURCHILL, J. & A., New Burlington-street, London.
Year-book of Pharmacy from 1st July, 1891, to 30th June, 1892. With the Transactions of the British Pharmaceutical Conference held at Edinburgh, August, 1892. pp. 608.
Physical Education. By F. Treves, F.R.C.S. 1892. pp. 75. Price 2s. 6d.
Transactions of the Ophthalmological Society of the United Kingdom. Vol XII. Session 1891-92.

CROSBY LOCKWOOD & SON, Ludgate-hill, London; and D. VAN NOSTRAND COMPANY, New York.
The Microscope, its Construction and Management. By Dr. H. V. Henrck. Translated by Wynne E. Baxter, F.R.M.S., F.G.S. Illustrated. 1893. pp 382.

DORNAN, W. J., Philadelphia.
Transactions of the American Surgical Association. Vol. X. Edited by J. Ewing Mears, M.D. 1892. pp. 280.

DOUGLAS, DAVID, Edinburgh.
Horses in Accident and Disease. By J. R. Cox, F.R.C.V.S. 1892.

FROWDE, HENRY, Amen-corner, London.
The Hospital Service Book. Short Services for use in the Wards of Hospitals and Infirmaries. By C. P. Baxter, M.A. 1892. pp. 190. Price 2s.

GRIFFIN, CHAS., & Co., Exeter-street, Strand, London.
On Peripheral Neuritis. A Treatise. By J. Ross, M.D. Aberd., and J. S. Bury, M.D. Illustrated. 1893. pp. 424.

KEGAN PAUL, TRENCH, TRÜBNER & Co., Charing-cross-road, London; and P. BLAKISTON, SON & Co., Philadelphia.
The Coal-Tar Colours. A Sanitary and Medico-legal Investigation. By Theodore Weyl. Translated by Henry Leffmann, M.D., Ph.D. 1892. pp. 154.

LIVINGSTONE, E. & S., Edinburgh.
Vaccination Eruptions—Original Research. By T. D. Poole, M.D. 1893. pp. 120.

LONGMANS, GREEN & Co., London.
Lay Down your Arms. The Autobiography of Martha von Tilling. Translated by T. Holmes. 1892. pp. 435. Price 7s. 6d.

MASSON, G., Paris.
Études de Clinique Chirurgicale. Par A. le Dentu. 1892. pp. 302.

OLIVER & BOYD, Edinburgh.
The Diseases and Deformities of the Fœtus. By J. W. Ballantyne, M.D., F.R.C.P.E. Vol. I. Illustrated. pp. 252. Price 10s. 6d.

PUTNAM'S SONS, London and New York.
Hygienic Measures in relation to Infectious Diseases. By G. H. F. Nuttall, M.D., Ph.D. (Göttingen). 1893. pp. 112.

SEGG & Co., Regent-street, London.
How to Give Gas. By T. E. Constant, M.R.C.S., L.R.C.P. Illustrated. pp. 36. Price 1s. 6d.

SIMPKIN, MARSHALL, HAMILTON & Co., London, and H. H. G. GRATTAN, the Borough, London-bridge.
Notes on the Malarial Fevers met with on the River Niger (West Africa). By W. H. Crosse. 1892. pp. 106.

SMITH, ELDER & Co., Waterloo-place, London.
Dictionary of National Biography. Edited by Sidney Lee. Vol. XXXIII. Leighton—Llwelyn. 1893 pp. 447.

STANFORD, E., Cockspur-street, Charing-cross, London.
Mediterranean Winter Resorts. Edited by E. A. St. Ball, F.R.G.S. Second Edition. 1892. pp. 336.

WOOD, WM., & Co., New York.
A Handbook of Pathological Anatomy and Histology. By F. Delafield, M.D., LL.D., and T. M. Prudden, M.D. Fourth Edition. Illustrated. 1892. pp. 715.
A Manual of Bacteriology. By G. M. Sternberg, M.D. Illustrated. 1892. pp. 886.

Bulletin of the American Academy of Medicine, No. 12, December, 1892 (published by the Academy at the Office of the Secretary, Lafayette College, Easton, Pennsylvania).—Dod's Peerage, Baronetage, and Knightage of Great Britain and Ireland for 1893; fifty-third year (Whitaker & Co., and G. Bell & Sons, London).—Transactions of the Obstetrical Society of London, Vol. XXXIV., for the year 1892; Part III. for June and July (published by the Society, 20, Hanover-square, London, W.); price 4s.—De la Cataracte; par le Dr. A. Ferret; 1893, pp. 131 (Société d'Editions Scientifiques, Paris).—Hygiène et Traitement du Diabète; par le Dr. E. Monin; Troisième édition (Société d'Editions Scientifiques, Paris).—Magazines (Christmas Numbers): Gentlewoman, Graphic, Queen Myra, Hearth and Home, Strand, Yule Tide, Publishers' Circular for January, Sunday at Home, Leisure Hour, Boy's Own Paper, Boy's Out-door Games and Recreations, Girl's Own Paper, Girl's Own Out-door Book (Religious Tract Society).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 29th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Dec. 23	30·00	E.	39	36	45	41	35	..	Cloudy
,, 24	30·01	E.	30	..	38	35	29	..	Cloudy
,, 25	30·00	N.E.	30	..	46	35	27	..	Bright
,, 26	30·12	N.E.	30	..	..	33	28	..	Hazy
,, 27	30·22	S.W.	24	..	..	35	22	..	Foggy
,, 28	30·33	S.W.	28	..	..	33	23	..	Foggy
,, 29	30·05	S.E.	32	..	30	35	26	..	Foggy

Medical Diary for the ensuing Week.

Monday, January 2.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2 P.M.

Tuesday, January 3.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 1.45; Saturday, 9.15.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, January 4.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Handfield-Jones, Dr. Napier, Dr. W. S. A. Griffith, Dr. Playfair, and others. Dr. Herman: On the Frequency of Local Symptoms associated with Backward Displacements of the Uterus.—Dr. Cullingworth: Note Supplementary to a Paper on Vaginal Hysterectomy, giving the subsequent history of the cases.

Thursday, January 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2 P.M.
HARVEIAN SOCIETY.—Discussion on "Obstruction of the Large Intestine," opened by Mr. Harrison Cripps.

Friday, January 6.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.

Saturday, January 7.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

Notes, Short Comments & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

COMMUNICATIONS relating to the EDITORIAL business of THE LANCET must in every case be addressed *exclusively* "To the Editors," and not to them otherwise than in their official capacity.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged in the future to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together.

We have had a large number of duplicate copies of the Index to the present half-yearly volume printed, and those of our subscribers who may wish to be supplied with loose copies, can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

A GRUESOME "FIND."

AN English mining company the other day in the Alpine commune of Bovegno (Province of Brescia) came upon a shaft, evidently of Roman excavation, across the mouth of which had been laid a wooden beam which, on contact with the air, crumbled immediately into dust. Letting themselves down into the shaft, some of the employés found at the bottom a great number of human skeletons, the osseous framework of men of almost gigantic build, and, not far from these, the entrance to an imperfectly cleared out gallery, in which lay scattered about pieces of a mineral containing silver: in combination with lead (*plumbum argentiferum*). This had doubtless been an ancient Roman mine in which the work of excavation had been performed by men of the neighbouring hill tribes, a company of whom had probably been buried alive by a landslip from the mountain above. The skeletons are being carefully preserved for the purpose of checking (possibly confirming) Professor Mosso's recent conclusions as to the comparative strength and stature of men of the Roman epoch and those of the present day.

Dr. J. A. MacMunn (Alderney) writes to ask if any cholera had existed in Cherbourg during the middle or latter end of November and the early part of this month. We believe that the only return as to cholera at Cherbourg related to four deaths towards the end of last month. But, unfortunately, the absence of returns from French ports by no means implies an absence of cholera.

ANÆSTHETIC ETHER.

To the Editors of THE LANCET.

SIRS,—We are glad to see from your review of Dr. D. W. Buxton's book on Anæsthetics that you very properly draw particular attention to the heading of Chap. iv., "Sulphuric Ether—Anæsthetic Ether." These terms have hitherto been only applied to ether obtained by the action of sulphuric acid on spirits of wine or methylated spirit. The introduction of a mixture consisting of amyl hydride and sulphuric ether under either of these names will undoubtedly produce endless confusion; and as this mixture cannot with safety be used as a general anæsthetic, fatal or serious accidents will be the natural result of its substitution for the preparation which has been so long known and used as anæsthetic ether. Amyl hydride is a hydro-carbon, not an ether, and can only be used with safety as a local anæsthetic, whereas the ordinary anæsthetic ether can be employed with equal safety for both local and general anæsthesia. It is therefore absolutely necessary that this mixture should bear some distinguishing name which will prevent the possibility of its being used for general anæsthesia. This, we think, might be done by calling it either "amyl hydride" or "petroleum ether."—We are, Sirs, yours faithfully,

Edinburgh, Dec. 26th, 1892. J. F. MACFARLAN AND CO.

"INFECTION" AND "CONTAGION."

Student.—We are not surprised at our correspondent's difficulty, for the terms as at present used are somewhat ambiguous. It would conduce to clearness if the term "contagion" were restricted to its precise signification of transmission by actual *contact*; but unfortunately it is often used in connexion with the transmission of specific poisons, aerially or otherwise, and it would be difficult to revert to its true meaning. When a distinction is made between the two terms and a disease is said to be "infectious" and not "contagious," the former term is applied solely to diseases capable of such indirect transmission. Then, again, with the growth of experimental research the phrase "infective" has come to include all affections which are propagated within the body by means of an organised virus, without any reference to their transmission to others. At the same time most, if not all, of the so-called "infective" diseases are capable of being propagated in other bodies by *inoculation* or the direct introduction into the blood of the virus. Owing to this extended use of the term "infective" it might perhaps be better now to divide all infective diseases into the two groups, "contagious"—using that word in its widest sense—and "inoculable," although the first will probably be found to include many of the second.

"VESALIUS THE ANATOMIST."

To the Editors of THE LANCET.

SIRS,—Your correspondent "G. M. C." (THE LANCET, Dec. 17th, p. 1424) will, I fear, find it extremely difficult to obtain the information he desires with regard to the domestic or matrimonial life of Vesalius. On these points contemporaneous writers and commentators, as well as later authors, are, so far at least as I have been able to ascertain, singularly reticent or meagre in the details they afford, the chief points thus chronicled being, firstly, those referring to his early devotion to anatomy and the precocity of his eminence therein, as shown by his first work on this subject having been composed in his nineteenth year; secondly, we have a mere outline of the different phases of his strangely varied career as professor of anatomy in Pavia and other Italian universities and as Physician in Ordinary to Charles V. and Philip II. of Spain; and, lastly, in fuller detail has been described the unfortunate misadventure which led to his exile from Spain and pilgrimage to Jerusalem, on returning from which he was shipwrecked at Zanti, where he perished from hunger in 1563. Little more is ascertainable from any of the works I have consulted with reference to the life of Vesalius. One of the most interesting of these in my possession is that published only thirty-three years after Vesalius's death, being a republication of his Anatomy by Paaw—viz., "Andreæ Vesalii, Bruxellensis Epitome Anatomica. Opud Redivivum, cum accepere Notæ ac Commentaria P. Paaw, Amstelædamensis, in Lugduno Batava Academia Professorii Anatomica. Lugdani, Batavorum, 1596." My copy of this somewhat rare work has been most copiously annotated in MS. in 1636 by an evidently English student in the same university—namely, "Gulielmus Perkinsius"; and as there is a short sketch of Vesalius's life prefixed I shall, if your correspondent should care to refer to it, be happy to let him see the volume.

I am, Sirs, yours very truly,

Dublin, Dec. 21st, 1892. THOS. MORE MADDEN.

GIVING MEDICINE WITHOUT SEEING THE PATIENT.

AT an inquest held in Whitechapel on the death of a man named Moses Van Pragen, aged seventy-eight, it transpired that he had had medicine from a practitioner for two years. Up to that time this gentleman, as medical officer of a medical aid society, attended Pragen at Norton Folgate for bladder and kidney trouble. He then told the friends to let him know if the deceased ever got worse. From that time till they came for a certificate of death he never saw him. The coroner did not reflect on the medical man and thought the only thing he could have done was to have refused a certificate. It speaks much for the medicine that it served in a serious case for two years and a half; but it is certainly unsatisfactory in any case to give medicine continuously without occasionally seeing the patient.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Birmingham Daily Post, Local Society, Health, Electrical Engineer, Galignani's Messenger, Schoolmaster, Home News, Southern Echo (Southampton), Kentish Express, Kelso Mail, Workington News, Caterer, Scientific American, Irish News, Optician, Belfast Evening Telegraph, Cork Constitution, Trade and Finance, Family Doctor, Louth Times, Brighouse Echo, Surrey Times, Jarrow Express, Dundee Courier, Public Opinion, Waterford Mirror, Figaro, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, City Press, Leeds Mercury, Yorkshire Post, Liverpool Daily Post, Bristol Mercury, Hertfordshire Mercury, Mining Journal, Reading Mercury, Hastings Independent, Bath Chronicle, West Sussex Gazette, Western Daily Press, Manchester Courier, South Australian Register, Madras Times, Surrey Advertiser, Local Government Journal, West Middlesex Advertiser, Citizen, Sunday Times, Builder, Architect, Times of India, Pioneer Mail, Kentish Express, Scotsman.*

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N.—*Nursing Record*, Editor of the.

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